UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

November 1, 2000

MEMORANDUM TO: Michael R. Johnson, Chief
Performance Assessment Section
Inspection Program Branch
Division of inspection Program Management
Office of Nuclear Reactor Regulation

FROM: August K. Spector, Communication Task Lead
Inspection Program Branch
Division of Inspection Program Management
Office of Nuclear Reactor Regulation

SUBJECT: REACTOR OVERSIGHT PROCESS SUMMARY OF PUBLIC MEETING HELD ON OCTOBER 31, 2000

On October 31, 2000 a public meeting was held at the NRC Headquarters, Two White Flint North, Rockville, MD to discuss the Reactor Oversight Process initial implementation. An agenda of the meeting, the attendance list, and information exchanged at the meeting are attached.

Attachments:

1. List of Participants
2. Topics Discussed
3. Operator Re-qualification Human Performance SDP - 10/21/00
4. NRC Inspection Manual Chapter 0608 Performance Indicator Program (draft)
5. ROP Performance Metrics 10/12/00
6. Performance Indicator Criteria/Metrics
7. Revised Treatment of Fault Exposure Hours
8. Bounding Analysis for Use of Default Hours in EDG SSU
9. ROP - PI Pilot Program Worksheet for Proposed Replacement for IE01 and IE02
10. Frequently Asked Questions, Log. 8, 9, 10, 11, 12, 13, 14, 15

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NAME:	ASpector AKS		A. Madison			
DATE:	11/1 /00		11/1 /00			

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NRC Public Meeting
Reactor Oversight Process
List of Participants
October 31, 2000

W. Dean, NRC
M. Johnson, NRC
D. Hickman, NRC.
R. Eckenrode, NRR
S. Sanders, NRC
A. Madison, NRC
A. Spector, NRC
R. Frahm, NRC
C. See, NRC
J. Jacobson, NRC
T. Boyce, NRC
M. Maley, NRC
J. Arildsen, NRC
A. Tardiff, NRC
A. Marion, NEI
S. Floyd, NEI
T. Houghton, NEI
J. Butler, NEI
R. Pinney, NJ Dept. Env.. Protection
W. Warren, Southern Nuclear
J. Nagle, PSEG
P. Loftus, COMED
D. R. Robinson, NPPD
C. Willbanks, NUS
J. Chase, OPPD
S. Crawford, Consultant
M. Taylor, PECO

Attachment 1

PUBLIC MEETING TO DISCUSS IMPLEMENTATION OF THE REVISED REACTOR OVERSIGHT PROCESS

DATE AND TIME: October 31, 2000
8:00 a.m. - 3:30 p.m.

LOCATION: U. S. Nuclear Regulatory Commission
One White Flint North

TOPICS DISCUSSED:

1. Consideration of issues associated with fault exposure time impact on Unavailability Performance indicators and potential approaches to resolution.
   (May establish working group, more discussion Dec. 6 meeting)
2. Operator re-qualification SDP draft update
   (ADAMS- ML003759758; draft for comment to regions in November; changes will be made to reflect input from regions and industry; final discussion Dec. 6 meeting)
3. Status report on Initiating Event PI pilot study
   (RIS to be issued 11/1; first data submittal 12/21/00)
4. Draft Manual Chapter 0608, Performance Indicator Program
   (Draft for comments to regions in November; changes will be made to reflect input from regions and industry; final discussion Dec. 6 meeting)
5. Proposed revision and mark-up of NEI 99-02 -- discussion
   (Discussed schedule for changes/revisions -- List of FAQ proposals for incorporation due Dec. 6; draft January 2001, comments February, March finalize for implementation April 2001)
6. Status on plant specific SDP worksheets
   (Brookhaven National Lab continues to work on project, expect distribution complete by December 29, 2000)
7. Review and approval of Frequently Asked Questions - see attached
8. Update by Office of Research or Risk-based PIs
   (Internal review of research report due by mid-November, to be discussed Dec. 6 meeting)
9. Loss of heat removal initiating event study results and its potential impact on PI thresholds
   (Discussed, no impact on PI thresholds)
10. Draft proposal related to unplanned transit changes
    (Continue discussion for Dec. 6 meeting)
11. Update on NRC's ROP self-assessment program
    (See attached, will discuss industry feedback at Dec. 6 meeting)
12. Status Cross-cutting working group
    (Public meeting scheduled for Dec. 11 in White Flint, Rockville, MD)
13. RCIC Counting
    (NEI provided results of their survey: 19 plants do not report; 10 plants report or will report -- 13 reports sent in to date; proposed revision to 99-02 due Dec. 6 meeting))
14. Status on Long-term SDP for Safeguards
    (Interim guidance December 2000, expect February final issuance; NRC/Industry working group to meet in December))
15. Status Industry trends
    (Preliminary discussion)
16. Determination of next meeting date and topics for discussion
    (December 6, 2000 next meeting
    Suggested topics:

Operator re-qualification SDP draft update
Draft Manual Chapter 0608, Performance Indicator Program
Proposed revision and mark-up of NEI 99-02 -- discussion
Review and approval of Frequently Asked Questions
Update on NRC's ROP self-assessment program
Update by Office of Research or Risk-based Pis)
Draft proposal related to unplanned transit changes
Issues associated with fault exposure time impact on Unavailability Performance indicators and potential approaches to resolution

ATTACHMENT 2

DRAFT
10/31/00

Operator Requalification
Human Performance
Significance Determination Process (SDP)

October 10, 2000

Introduction:

The attached flowchart and matrix comprise the proposed process for determining the risk importance of issues identified during an inspection of the licensed operator requalification program or by a Resident Inspector's observation of requalification activities. This process covers only those issues related to the operator requal program. It is the staff's current position that performance errors made by a licensed operator leading to, or during an actual operational event, are an integral part of the overall outcome of the event and would be reflected in the event risk determination or ultimately in a performance indicator. This position is being examined through a research project and an analysis of data in the Human Factors Information System.

Each issue should first be screened by using the Group 1, 2 and 3 questions of Manual Chapter 610*, Appendix E to determine whether it is a minor concern. At a minimum, Group 1 questions 2 through 5, Group 2 questions on Reactor Safety, and several of the Group 3 questions could be applicable to requal issues.

This SDP starts when an operator requal issue is identified and screened by a Regional Inspector based on IP 71111.11 and the sample of items selected, or by a Resident Inspector based on the IP 71111.11 Resident's Quarterly Review and the licensee's test records. It can be related to the programmatic aspects (e.g. exam grading, exam quality, exam security) or to the performance of licensed operators during the written exam or the annual operating test. This SDP is applicable to requal issues related to all licensed operators, including both shift and staff crews, with either active or inactive licenses. The process is applicable to all license holders since a staff crew member could, at any time, be asked to go on-shift and because an inactive license holder needs only to spend the required time on-shift to activate a license. A crew is defined as any group of individuals evaluated as a single entity by the licensee on the basis of its performance on the dynamic simulator.

Simulator Operational Evaluation Matrix:

The Simulator Operational Evaluation Matrix provides a guide to the perceived risk associated with the number of crews failing the annual operating test as related to the number of crews taking the test. The "Number of Crews that took the Annual Operating Test" includes multiple units in order to accommodate those instances where operators hold dual unit licenses. If a multiple unit site has separate unit licenses, the matrix should be used to assess the results at each of the units separately. The chart accommodates up to sixteen crews and eight UNSAT crews. If more crews are tested or are UNSAT in a particular cycle, the finding color can be determined by the percentages at the bottom of the chart. The information should be obtained by the Resident Inspector at the end of the testing cycle as part of the Residents' Quarterly

Attachment #3

Review. Less than 20% failure rate is considered satisfactory and therefore does not constitute a finding to be recorded in an inspection report. A failure rate of 20% to 34% is considered to be a green finding to be turned over to the licensee for corrective action. An operating test failure rate greater than 34% meets the NUREG-1021, Rev 8 criteria for an UNSAT Requal Program and is considered to be a white finding up to 50%. Should more than half the crews fail, it is considered to be a serious programmatic weakness and a yellow finding. Requal operating test failure rate alone is never considered to be a red finding unless over half the crews failed and one or more of the failed crews are returned to the shift without remediation. Use of this matrix is explained below in the description of the flow chart blocks.

The SDP Flow Chart:

The Requal SDP process starts with a single issue (Block #1) identified by the Regional or Resident inspectors during their conduct of Inspection Procedure 71111.11, "Licensed Operator Requalification Program." It includes issues identified by the Regional and Resident Inspectors on selected samples of data, from interviews, or analyses of the operating test results by the Resident Inspectors at the end of the testing cycle. The process attempts to include only those aspects of the requal program considered to be risk important. For example, the student feedback system in-and-of itself has little risk importance, but its review might lead the inspector to issues that are risk important. Issues screened out by the process should still be reported as observations if they are indicative of trends or significant extent of condition.

The process first examines inspector issues related to the licensee's grading of the exam to ensure that failed candidates or crews are properly identified and not passed inappropriately. Once again, the risk importance is not that the licensee's grading process was inadequate or flawed, but that inadequately trained operators may be allowed to go on shift. The inadequacy of the grading process may turn out to be a contributing factor, but inadequate training is probably the root cause.

The next parts of the SDP process are related to the written and walkthrough portions of requal (pages 1 and 2 of the flowchart), and address issues of exam quality and security and the performance of multiple individuals. The risk determination assumes that a single individual failure in requal does not rise to the risk significance of a green finding. However, when multiple failures are considered, more than 20% has been selected as the threshold for an unacceptable number of failures. This is generally consistent with the guidance in the examination standards of NUREG-1021, Rev. 8. Thus, more than 20% unacceptable written test items is the quality threshold; more than 20% of the operators failing the written portion is the performance threshold; more than 20% of the operators failing the operating test walkthrough is the walkthrough performance threshold, etc.

The simulator portion of the SDP (pages 3 and 4 of the flowchart) evaluates scenario quality and security and performance of crews. Again, an individual failing in the simulator portion does not rise to the risk significance of a green finding. The risk significance of crew performance depends on the percentage of crews that have failed, whether they were remediated before returning to shift, and whether the facility had a failure rate of green or higher (as determined by the SDP Simulator Operational Evaluation Matrix) in the previous annual operating test. The risk assessment of operator performance on the simulator should

include all of the crews tested based on test records, even if the inspectors witnessed testing of only some of the crews.

Finally, the SDP looks at the overall requal program by asking if less than 75% of the operators passed all portions of the exam (NUREG-1021, Rev. 8, ES 601), and if more than 20% of the operator licensing records have operationally risk important deficiencies.

Flowchart Block Descriptions

#1 - This SDP starts after a single operator requal issue is identified and screened through Manual Chapter 0610*, Appendix E questions during an inspection of the licensed operator requalification program, or by a Resident Inspector's observation of requalification activities or analysis of test records at the end of the cycle. Each specific issue must be evaluated separately. An issue can be related to the programmatic aspects (e.g. exam grading, exam quality, operator licensing records) or to the performance of licensed operators during the written or annual operating test.

#2 - Is the issue related to incorrect or inappropriate grading of the written exam or operating test by the licensee? This can be identified, for example, as a result of the inspector's observation of the operating test or an evaluation of the grading of a sample of the written exam.

#3 - Did the inspector's review of a sample of the written exam identify an issue with the grading that would have failed a candidate that the licensee's examiner passed? Did the inspector identify a crew or individual operator performance issue in the operating test that should have resulted in a failure, but was not identified by the licensee's examiner? These are considered risk important issues, since operators or crews with unsatisfactory evaluations could be placed on shift.

#4 - Is the issue related to written exam quality, security or operator performance in taking the exam? This issue may stem from student feedback or other personnel interviews as well as inspector observation or data analysis.

#5 - Is the issue related to the individual operating test (generally JPM) quality, security or operator performance in the walkthrough? This issue may stem from student feedback or other personnel interviews as well as inspector observation or data analysis.

#6 - Is the issue related to the physical or functional fidelity of the simulator as compared to the real plant? This issue may stem from student feedback or other personnel interviews, review of simulator performance tests, as well as inspector observation.

#7 - Is the issue related to the quality of the individual operating test? This issue may stem from student feedback or other personnel interviews as well as inspector observation or data analysis. Has the appropriate significant information from the feedback system been incorporated in the individual operating test?

#8 - Has security of the individual operating test content been compromised? This refers to a loss of control of the exam material such that exam validity is affected. Knowledge of an exam security breach can occur through two principal means: (1) the inspector's direct knowledge and/or evidence or information that such a breach occurred and/or, (2) an analysis of operator post exam results suspected to have been influenced by a security breach or exposure that reveals that the exam results attained are not probable or likely given the history of the operator's past performance. The second method is possible, but not likely in the operating tests.

If the compromise was determined to be inadvertent and the test is rewritten prior to administration, it is not a risk important finding and the answer to this block is "no."

#9 - Have more than 20% of the operators who took the individual operating test in this training cycle failed? This should be determined by the Resident Inspector as part of the IP 71111.11 quarterly review by examining the licensee's test records at the end of the cycle.

#10 - Were more than 20% of the individual operating test items reviewed by the inspector unacceptable? This is based on the sample selected by the inspector and the acceptance criteria established in NUREG-1021, Rev. 8, Appendix C, Form ES-C-2.

#11 - When the security compromise was discovered did the licensee take compensatory measures immediately? The risk importance increases if the test security was compromised, the individual returned to shift and compensatory actions were not taken immediately upon discovery.

#12 - Could deviations or differences between the plant control room and the plant reference simulator negatively impact operator actions? There will always be some physical or functional differences between the simulator and the control room, but the concern here is how they impact the operator. Could the differences result in negative training? ANSI/ANS-3.5-1993/1998, "Nuclear Power Plant Simulators for Use in Operator Training and Examination," Section 4.2.1.4, provides guidance in assessing the deviations.

#13 - Is the issue related to the quality (accuracy, clarity, appropriateness, discrimination, etc.) of the written exam? Has the appropriate significant information from the feedback system been incorporated in the written exam.

#14 - Has the security of the written exam content been compromised? This refers to a loss of control of the exam material such that the exam validity is affected. Knowledge of an exam security breach can occur through two principal means: (1) the inspector's direct knowledge and/or evidence or information that a breach occurred and/or, (2) an analysis of operator post exam results suspected to have been influenced by a security breach or exposure that reveal that the exam results attained are not probable or likely given the history of the operator's past performance.

If the compromise was determined to be inadvertent and the test is rewritten prior to administration, it is not a risk important finding and the answer to this block is "no."

#15 - Have more than 20% of the operators who took the written exam in this training cycle failed? This should be determined by the Resident Inspector as part of the IP 71111.11 quarterly review by examining the licensee's test records at the end of the cycle.

#16 - Were more than 20% of the written questions reviewed by the inspector unacceptable? This is based on the sample selected by the inspector and the acceptance criteria established in NUREG-1021, Rev. 8, ES-602, Attachment 1 and Appendix B.

#17 - When the security compromise was discovered did the licensee take compensatory measures immediately? The risk importance increases if the test security was compromised, the individual returned to shift and compensatory actions were not taken immediately upon discovery.

#18 - (intentionally left blank)

#19 - (intentionally left blank)

#20 - Is the issue related to the qualitative (realism, event sequencing, difficulty, etc.) or quantitative (number of normal evolutions, malfunctions, transients, etc.) aspects of the scenario? Has the appropriate significant information from the feedback system been incorporated in the scenarios?

#21 Has security of the scenario been compromised? This refers to loss of control of the scenario identity or material such the operating test validity is affected. Knowledge of a scenario security breach can occur through two principal means: (1) the inspector's direct knowledge and/or evidence or information that a breach occurred and/or, (2) an analysis of operator or crew post test results suspected to have been influenced by a security breach or exposure, that reveal that the operating test results attained are not probable or likely given the history of the operator's or crew's past performance. The second method is possible, but not likely in the operating tests.

If the compromise was determined to be inadvertent and the scenario was rewritten or another selected prior to administration, it is not a risk important finding and the answer to this block is "no."

#22 - Is the issue related to crew performance on the dynamic simulator operating test? Crew performance is a demonstration of the ability to effectively operate as a team while completing a series of critical tasks that measure the crews ability to safely operate the plant during normal, abnormal, and emergency situations. The facility licensee will conduct its annual operator performance evaluations in accordance with the requirements of its requalification program. If the licensee chooses to fail crews based on poor performance related to administrative tasks in addition to simulator critical tasks then they will count as failures in this SDP, unless the licensee specifically records these as administrative failures for remediation purposes.

#23 - Based on the licensee's records, did less than 75% of the operators in this training cycle pass all portions of the exam (Reference NUREG-1021, Rev. 8, ES-601)? This information should be determined by the Resident Inspector as part of the IP 71111.11 quarterly review by examining the licensee's test records at the end of the cycle.

#24 - Is the issue related to the licensee's program for maintaining active operator licenses and ensuring the medical fitness of its licensed operators?

#25 - Were more than 20% of the scenarios in the sample reviewed by the inspector unacceptable based on the qualitative and quantitative criteria of NUREG-1021, Rev. 8, Appendix D and the "Simulator Scenario Review Checklist," (Form ES-604-1)?

#26 - When the security compromise was discovered did the licensee take immediate compensatory measures? The risk importance increases if the operating test was compromised, individuals or crew returned to shift and compensatory actions were not taken immediately upon discovery.

27 - Based on the sample selected by the inspector, did more than 20% of the records indicate deficiencies that could pose a potential risk to operations, as described in IP 71111.11, Section 03.08? For example, are crew members maintaining active licenses and are their qualifications current? Is the licensee complying with special license conditions for medical limitations, notification of medical restrictions as required by 10 CFR 50.74(c) and are physical examinations up to date? Based on the judgement of the inspector, administrative errors in the records, having no bearing on operational safety, should not be considered as issues to be entered into the SDP.

#28 - (intentionally left blank)

#29 - (intentionally left blank)

#30 - Was the simulator operating test crew failure rate for the entire cycle greater than 50% (Yellow on matrix)? This information should be determined by the Resident Inspector as part of the IP 71111.11 quarterly review by examining the licensee's test records at the end of the cycle.

#31 - Were the failed crews (50% or less of total number of crews) remediated and completely re-tested successfully before they were returned to shift? Even a single failed crew returning to shift is a potential risk and is considered to be at least a White Finding.

#32 - Were the failed crews (greater than 50% of total number of crews) remediated and re-tested successfully before they were returned to shift? If "yes" this remains a Yellow Finding for the shear magnitude of the programatic problem. If "no" it is an even more serious problem (Red Finding) and deserves significant NRC attention.

#33 - Was the operating test failure rate less than 20%, or between 34% and 50%? Less than 20% failure rate and the failed crews satisfactorily remediated before returning to shift remains a No Finding. Failure rate between 34% and 50% and the failed crews satisfactorily remediated before returning to shift remains a White Finding because it still indicates an UNSAT Requal Program as defined by NUREG-1021, Rev. 8, ES-601, E.3.a.(2).

#34 - If the failure rate in the current operating test cycle is between 20% and 34% (Green Finding) and it was green or higher in the last operating test cycle, the concern is that this is a repeat issue, a potential weakness in the SAT process, and corrective actions are not working

satisfactorily. Thus, the issue is escalated to a White Finding. If the failure rate in the current operating test cycle is white or higher, and it was green or higher in the last cycle, further escalation is unnecessary, and the current color remains.

Simulator Operational Evaluation

September 21, 2000

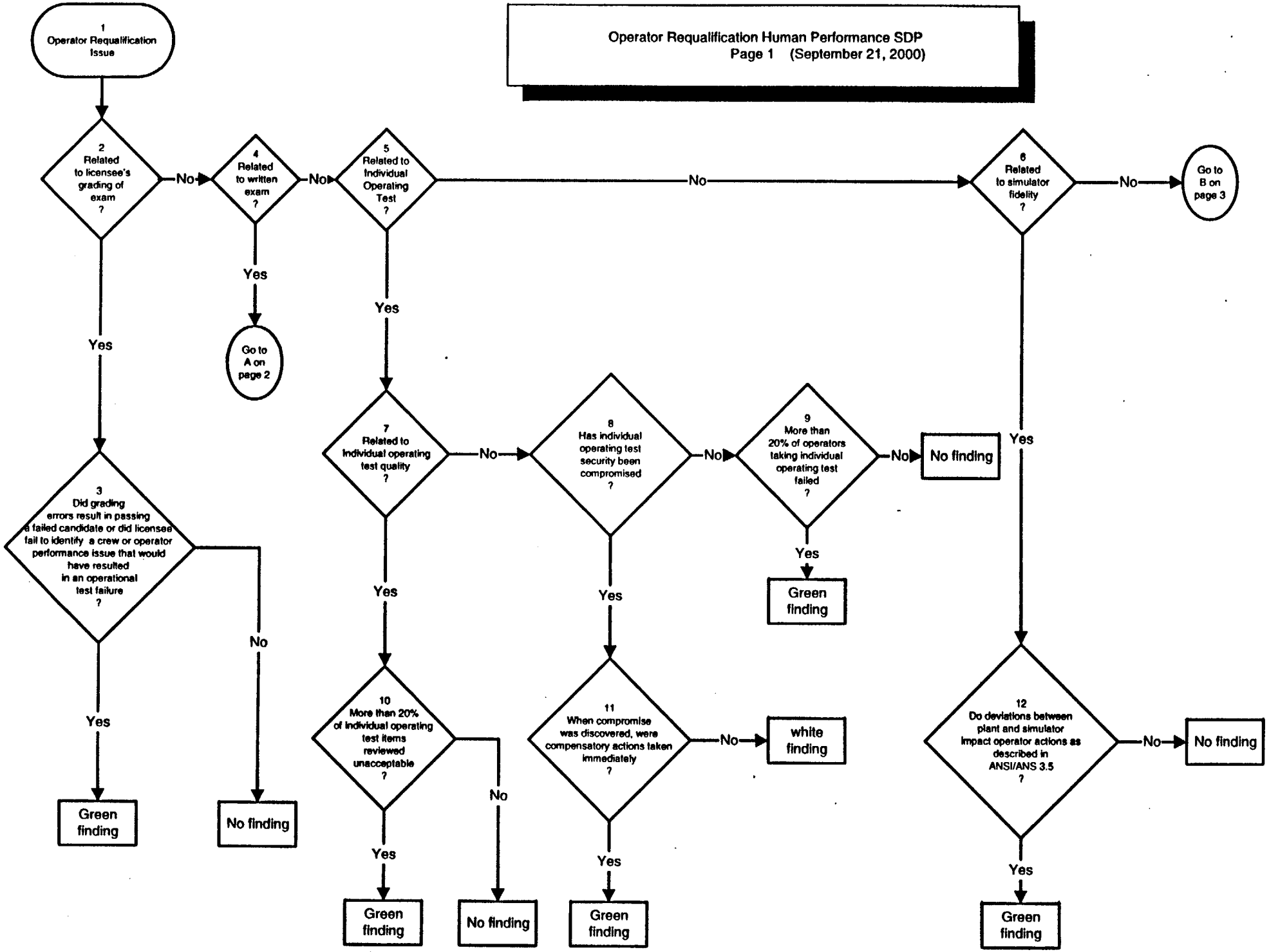
Number of Crews
with
UNSAT Performance in the
Annual Operating Test

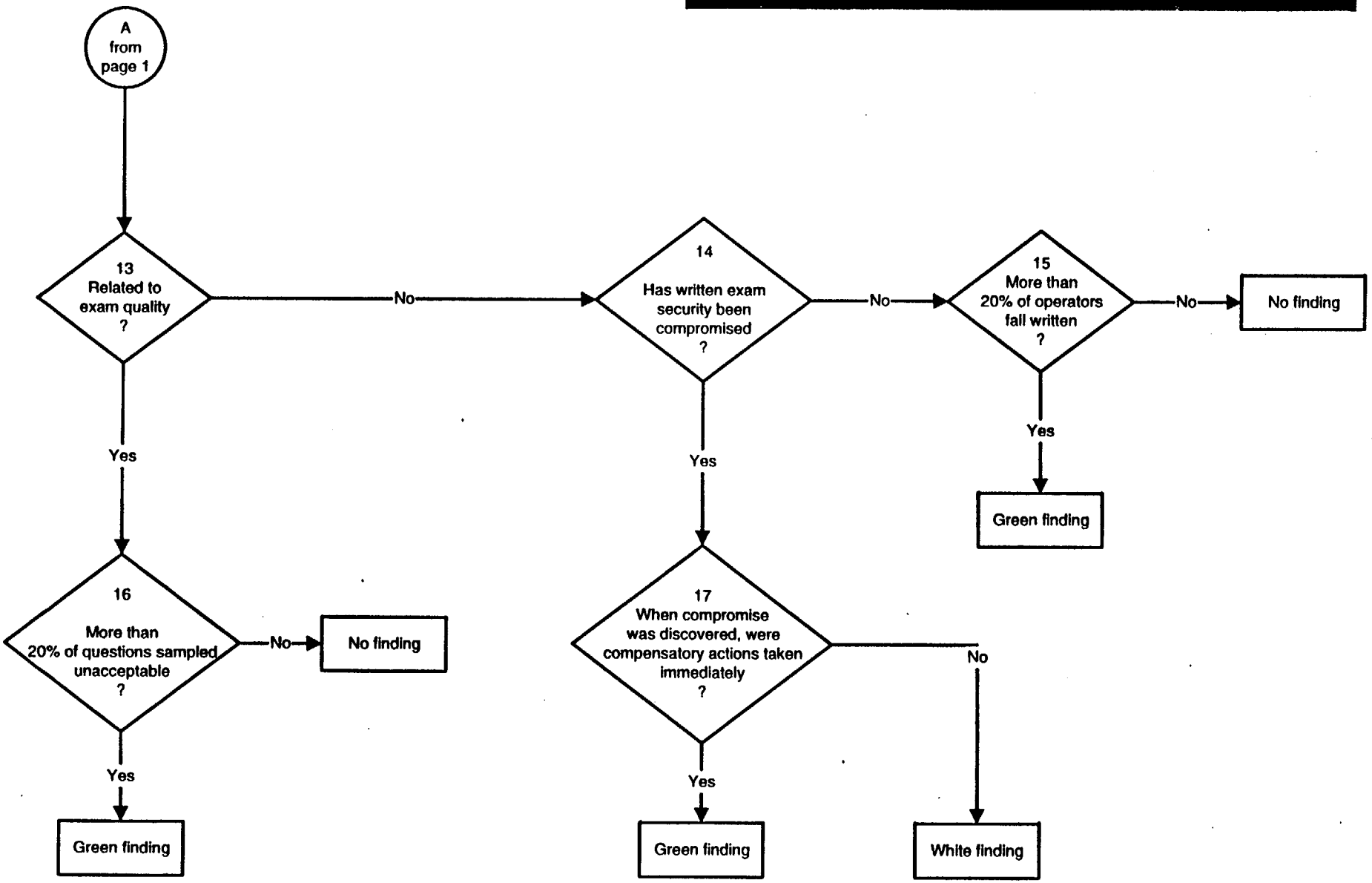
Number of Crews that took the Annual Operating Test (Includes Dual Units)

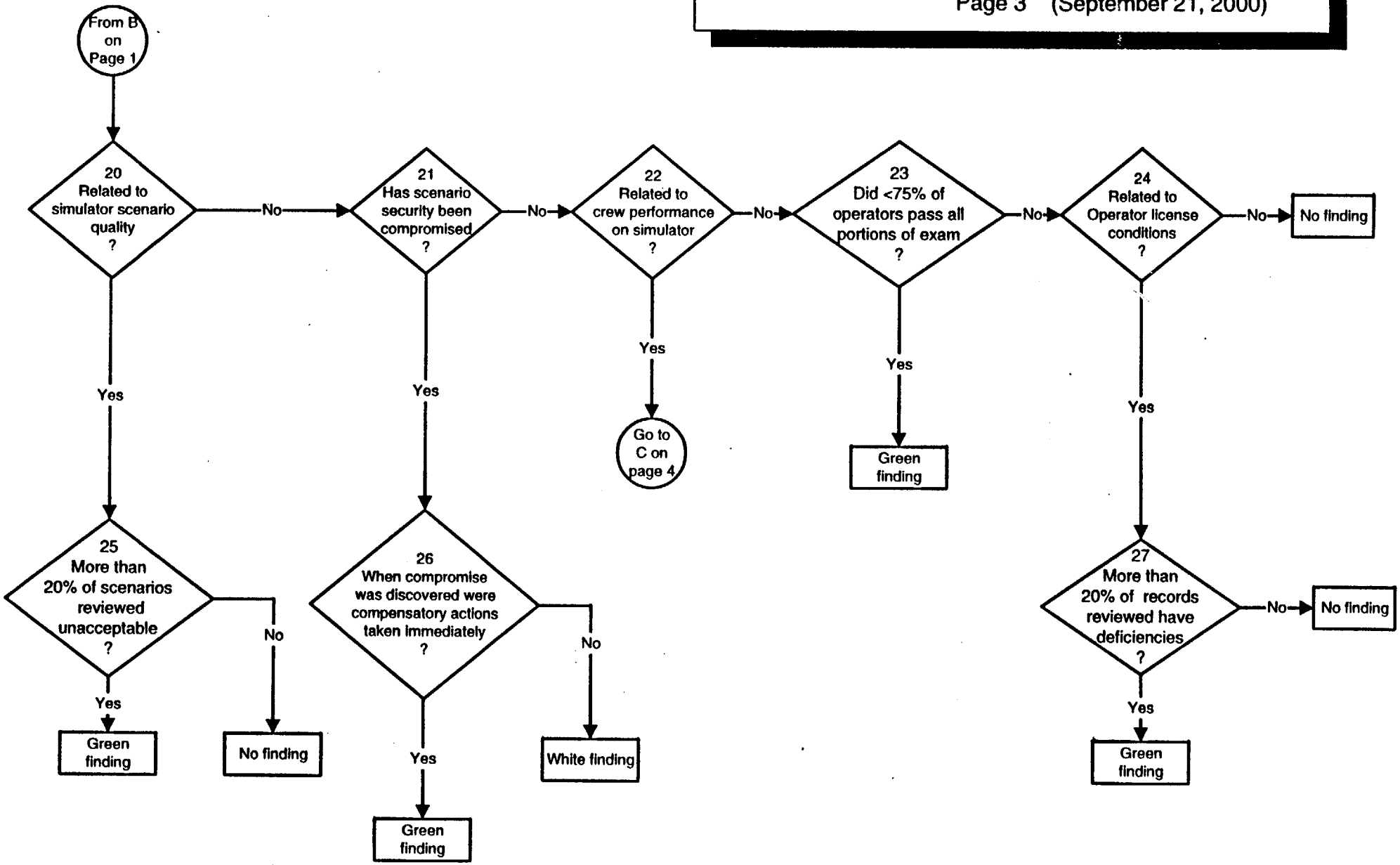
	1	2	3	4	5	6	7	8
4	G	W	Y	Y	NA	NA	NA	NA
5	G	W	Y	Y	Y	NA	NA	NA
6	NF	G	W	Y	Y	Y	NA	NA
7	NF	G	W	Y	Y	Y	Y	NA
8	NF	G	W	W	Y	Y	Y	Y
9	NF	G	G	W	Y	Y	Y	Y
10	NF	G	G	W	W	Y	Y	Y
11	NF	NF	G	W	W	Y	Y	Y
12	NF	NF	G	G	W	W	Y	Y
13	NF	NF	G	G	W	W	Y	Y
14	NF	NF	G	G	W	W	W	Y
15	NF	NF	G	G	G	W	W	Y
16	NF	NF	NF	G	G	W	W	W

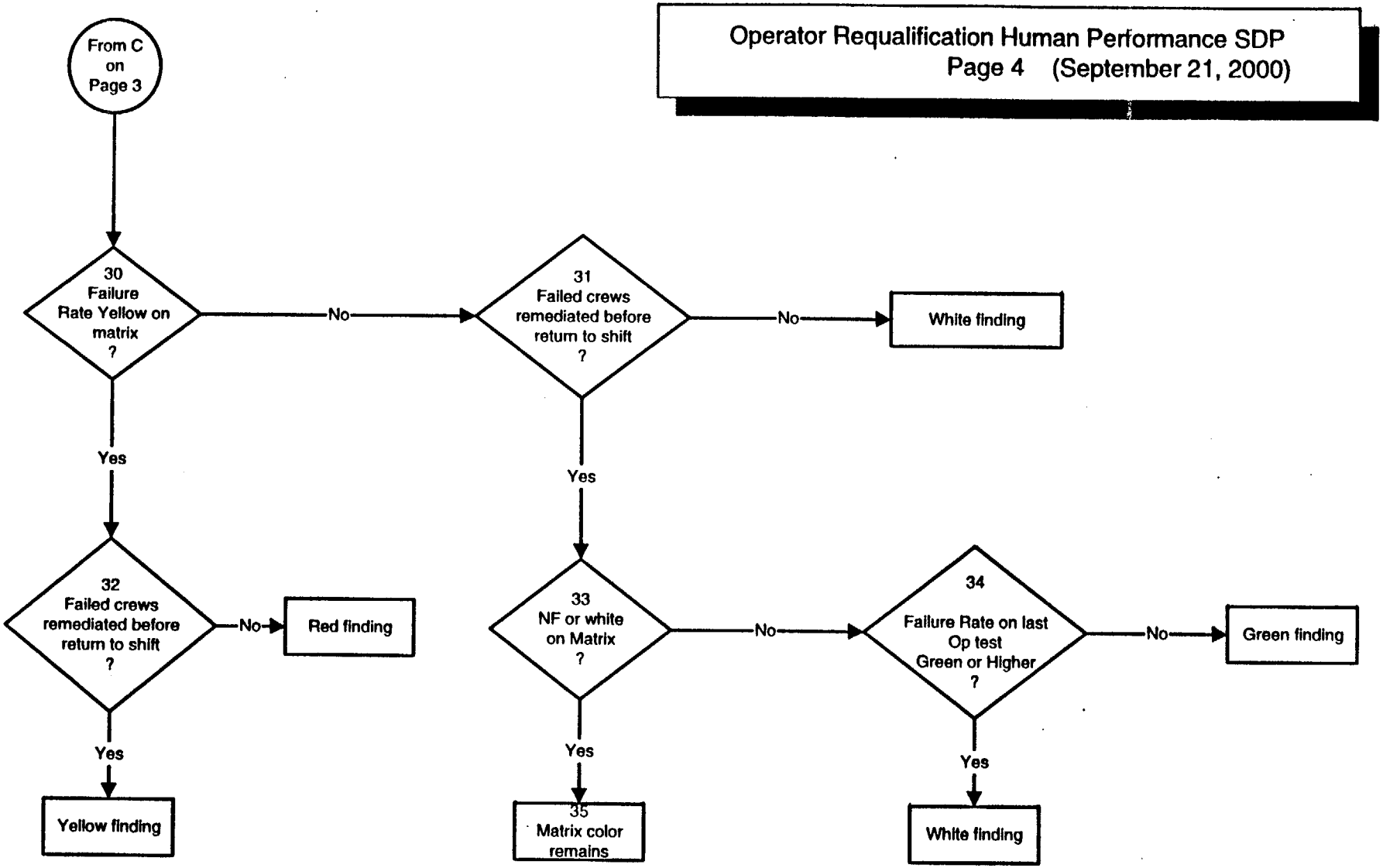
NF = < 20% Failure Rate - No Finding
G = 20 - 34% Failure Rate
W = >34 - 50% Failure Rate (NUREG-1021, Rev 8 - UNSAT Requal Program)
Y = >50% Failure Rate
NA = Not Applicable

Note: If more than 16 crews are tested, or more than 8 crews are UNSAT in a given cycle, use the percentages above to determine the appropriate color.


Operator Requalification Human Performance SDP
Page 1 (September 21, 2000)
1
Operator Requalification Issue
2
Related to licensee's grading of exam ?
No
4
Related to written exam ?
No
5
Related to Individual Operating Test ?
No
6
Related to simulator fidelity ?
No
Go to B on page 3
Yes
Go to A on page 2
Yes
3
Did grading errors result in passing a failed candidate or did licensee fail to identify a crew or operator performance issue that would have resulted in an operational test failure ?
Yes
No
Green finding
No finding
Yes
7
Related to individual operating test quality ?
No
8
Has individual operating test security been compromised ?
No
9
More than 20% of operators taking individual operating test failed ?
No
No finding
Yes
Green finding
Yes
Yes
10
More than 20% of individual operating test items reviewed unacceptable ?
No
11
When compromise was discovered, were compensatory actions taken immediately ?
No
white finding
Yes
12
Do deviations between plant and simulator impact operator actions as described in ANSI/ANS 3.5 ?
No
No finding
Yes
Green finding
No finding
Green finding
Green finding


A
from
page 1
13
Related to
exam quality
?
No
14
Has written exam
security been
compromised
?
No
15
More than
20% of operators
fail written
?
No
No finding
Yes
Green finding
Yes
16
More than
20% of questions sampled
unacceptable
?
No
No finding
Yes
Green finding
Yes
17
When compromise
was discovered, were
compensatory actions taken
immediately
?
No
Yes
Green finding
White finding


From B on Page 1
20 Related to simulator scenario quality ?
No
21 Has scenario security been compromised ?
No
22 Related to crew performance on simulator ?
No
23 Did <75% of operators pass all portions of exam ?
No
24 Related to Operator license conditions ?
No
No finding
Yes
Yes
Yes
Yes
Go to C on page 4
Green finding
25 More than 20% of scenarios reviewed unacceptable ?
No
Yes
Green finding
No finding
26 When compromise was discovered were compensatory actions taken immediately ?
No
Yes
White finding
Green finding
27 More than 20% of records reviewed have deficiencies ?
No
No finding
Yes
Green finding


From C on Page 3
30 Failure Rate Yellow on matrix ?
No
31 Failed crews remediated before return to shift ?
No
White finding
Yes
Yes
32 Failed crews remediated before return to shift ?
No
Red finding
33 NF or white on Matrix ?
No
34 Failure Rate on last Op test Green or Higher ?
No
Green finding
Yes
Yes
Yes
Yellow finding
35 Matrix color remains
White finding

10/31/00

NRC INSPECTION MANUAL

Manual Chapter 0608

PERFORMANCE INDICATOR PROGRAM

0608-01 PURPOSE

To provide guidance on the implementation of the operating Reactor Oversight Process (ROP) Performance Indicator Program. Additionally, this manual chapter provides guidance on the process for modifying existing performance indicators (PIs) and developing additional PIs for use in the oversight process.

0608-02 OBJECTIVE

02.01 To provide policy and guidance regarding implementation of the PI Program, including data submission, verification, and posting PI data and frequently asked questions (FAQs) on the internal and external web.

02.02 Establish a formal process for responding to questions related to interpretation of PI reporting guidance and developing and implementing changes to the PI Program including creating new PIs and making changes to existing PIs or thresholds.

0608-03 APPLICABILITY

This manual chapter applies to all operating commercial nuclear power reactors.

0608-04 DEFINITIONS

Extended Shutdown. For the purposes of the ROP PI Program, a plant is considered to be in an extended shutdown condition when the reactor has been subcritical for at least two consecutive quarters.

Frequently Asked Question. Questions raised by either internal or external stakeholders regarding the PI Program or its implementation along with the approved response. FAQs are available for review on both the NRC's internal and external web sites. The web site is periodically updated to include draft FAQs (i.e., FAQs for which the response has not yet been approved) and FAQs that have been approved for use. FAQs can be viewed by cornerstone, PI, posting date, or identification number.

0608-05 RESPONSIBILITIES AND AUTHORITIES

Attachment 4

05.01 Director, Office of Nuclear Reactor Regulation (NRR)

a. Provides overall policy direction for the PI Program.

b. Directs the development and implementation of policies, programs, and procedures for the PI Program and oversight of program effectiveness and implementation.

05.02 Associate Director for Inspection and Programs. Directs development and implementation of the PI Program within the Office of Nuclear Reactor Regulation (NRR).

05.03 Director, Division of Inspection Program Management (DIPM). Manages PI Program development and implementation within NRR and oversees program implementation and effectiveness.

05.04 Chief, Inspection Program Branch

a. Develops policy, programs, and procedures for implementation of the PI Program

b. Receives PI data and posts PI data indicator values and FAQs on the internal and external web.

c. Manages and implements the process for responding to questions related to interpretation of PI reporting guidance and developing and implementing changes to the PI Program, including creating new PIs and making changes to existing PIs or thresholds.

d. Assesses PI Program effectiveness and implementation.

05.05 Regional Administrator

Manages regional implementation of the PI Program in accordance with the requirements of the IMC, Management Directive (MD) 8.13, "Reactor Oversight Process," Inspection Procedure (IP) 71151, "Performance Indicator Verification," and IP 71150, "Discrepant or Unreported Performance Indicator Data."

0608-06 BACKGROUND

06.01 Framework

The ROP is built upon a framework directly linked to the Agency's mission. That framework includes cornerstones of safety that focus on the licensee's ability to (1) limit the frequency of initiating events; (2) ensure the availability, reliability, and capability of mitigating systems; (3) ensure the integrity of the fuel cladding, the reactor coolant system, and containment; (4) ensure the adequacy of the emergency preparedness functions; (5) protect the public from exposure to radioactive material releases; (6) protect nuclear plant workers from exposure to

radiation; and (7) provide assurance that the physical protection system can protect against the design-basis threat of radiological sabotage.

Within each cornerstone, a broad sample of data on which to assess licensee performance in risk-significant areas is gathered from PI data submitted by licensees and from the NRC's risk-informed baseline inspections. The PIs are not intended to provide complete coverage of every aspect of plant design and operation, but are intended to be indicative of performance within the related cornerstone.

Data submitted by each licensee is used to calculate PI values. These values are then compared to generic, objective thresholds that establish color bands for the performance indicated by the PI. Plant data for a PI that falls within the "green" band indicates performance within an expected level of nominal utility performance in which the related cornerstone objectives are met; performance in the "white" band indicates performance outside an expected range of nominal utility performance but related cornerstone objectives are still being met; performance in the "yellow" band indicates further degradation of performance in which the related cornerstone objectives are still being met, but with a reduction in safety margin; and performance in the "red" band indicates that a significant reduction in safety margin has occurred in the area measured by that performance indicator.

06.02 Performance Indicators

The PIs are a means of obtaining information related to the performance of certain key attributes in each of the cornerstone areas. They provide indication of problems that, if uncorrected, may increase the probability of risk or consequence of an event. Since not all aspects of licensee performance can be monitored by PIs, the risk-significant areas not covered by PIs will be assessed through inspection.

A. For the reactor safety area, the cornerstones and PIs are as follows:

Initiating Events - this cornerstone is intended to limit the frequency of those events that upset plant stability and challenge critical safety functions during shutdown as well as power operations. Such events include reactor trips due to turbine trips, loss of feedwater, loss of off-site power, and other reactor transients. The following indicators are provided in this cornerstone:

- Unplanned scrams (automatic and manual) per 7,000 critical hours
- Scrams with loss of normal heat removal
- Unplanned power changes per 7,000 critical hours

Mitigating Systems - this cornerstone is intended to ensure the availability, reliability, and capability of systems that mitigate initiating events to prevent reactor accidents. Mitigating systems (both operating and shutdown events) include those systems associated with safety injection, residual heat removal, and their support systems, such as emergency AC power. The following indicators are provided in this cornerstone:

- Safety System Unavailability - this performance indicator is calculated separately for each of the following four systems for each reactor type:

BWRs
- emergency AC power systems
- high pressure injection systems (high pressure coolant injection, high pressure core spray, or feedwater coolant injection)
- residual heat removal systems
- heat removal systems

PWRs
- emergency AC power systems
- high pressure safety injection systems
- residual heat removal systems
- auxiliary feedwater systems

- Safety System Functional Failures

Barrier Integrity - this cornerstone is intended to ensure the integrity of the physical barriers designed to protect the public from radionuclide releases caused by accidents. These barriers are the fuel cladding, reactor coolant system boundary, and containment. The following indicators are provided in this cornerstone:

- Reactor Coolant System (RCS) Specific Activity
- RCS Identified (or total) Leak Rate

Emergency Preparedness - this cornerstone is intended to ensure that actions taken in accordance with the emergency plan provide adequate protection of the public health and safety during a radiological emergency. The cornerstone does not include off-site actions, which are covered by the Federal Emergency Management Agency. The following indicators are provided in this cornerstone:

- Drill/Exercise Performance
- Emergency Response Organization Drill Participation
- Alert and Notification System Reliability

B. For the radiation safety area, the cornerstones and PIs are as follows:

Occupational Radiation Safety - this cornerstone is intended to ensure adequate protection of worker health and safety from exposure to radiation and radioactive materials during routine civilian nuclear reactor operations. The following indicator is provided in this cornerstone:

- Occupational Exposure Control Effectiveness

Public Radiation Safety - this cornerstone is intended to ensure adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian nuclear reactor operations. These releases include routine gaseous and liquid radioactive effluent discharges, the inadvertent release of

solid contaminated materials, and the offsite transport of radioactive materials and wastes. The following indicator is provided in this cornerstone:

- Radiological Effluent Technical Specifications (RETS)/Offsite Dose Calculation Manual (ODCM) Radiological Effluent Occurrences

C. For the safeguards area, the cornerstone and PIs are as follows:

Physical Protection - this cornerstone is intended to provide assurance that the physical protection system can protect against the design basis threat of radiological sabotage. The threat could come from either external or internal sources. The following indicators are provided in this cornerstone:

- Protected Area Security Equipment Performance Index
- Personnel Screening Program Performance
- Fitness-for-Duty (FFD)/Personnel Reliability Program Performance

0608-07 PI DATA SUBMISSION

Reporting of PI data to the NRC is a voluntary program in which all licensees of operating reactor plants participate. In preparation for the start of implementation of the ROP, licensees were requested to submit historical PI data. This data was submitted on January 21, 2000, using the guidelines of Regulatory Issues Summary 99-06, "Voluntary Submission of Performance Indicator Data," and NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision D.

On March 29, 2000, the NRC issued Regulatory Issues Summary 2000-08, "Voluntary Submission of Performance Indicator Data." The purpose of this RIS was to inform licensees of the start of initial implementation of the ROP and to provide direction on the process to be used by licensees to voluntarily submit PI data to the NRC as part of the ROP. The RIS indicated that PI data should be submitted quarterly and in accordance with NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 0. Initial implementation of the ROP began on April 2, 2000. The first quarterly submission of PI data occurred on April 21, 2000.

To submit PI data, licensees send a delimited text file to a central NRC e-mail address - pidata@nrc.gov. Hard copy submissions, in accordance with 10 CFR 50.4 "Written Communications," are not required, except in the event that the email submission is unsuccessful. Within two business days of receipt of the PI data, the NRC will send each licensee a return email to confirm and authenticate receipt of the data. Licensees have four business days from receipt of the NRC's email to report any transmission problems to the NRC.

Once the data is confirmed by the NRC, it is entered into the Reactor Program System database to calculate the indicator values. Within five business days from receipt of the licensees' data transmissions, the NRC will post the data, the indicator values, and associated graphs on the NRC's internal web site. The regions will be notified by e-mail that the PIs are available on the internal web site. This is to allow the regions an opportunity to become familiar with the PIs and to identify any obvious inconsistencies prior to public release. Within 10

business days of receipt of the licensees' data transmittals, the NRC will place the PIs on the NRC's external web site to make them available to external stakeholders.

07.01 PI Submission For Plants In Extended Shutdown

An operating commercial nuclear power plant with performance or major equipment problems may be shut down for an extended period of time for a variety of reasons. Licensees may voluntarily or involuntarily shut down the plant due to significantly degraded performance, major equipment failures, or a significant plant event. In these cases, the NRC may make the decision to place the plant under the process described in Inspection Manual Chapter 0350, "Staff Guidelines For Assessment and Review Of Plants That Are Not Under The Routine Reactor Oversight Process."

For the purposes of the ROP, a plant is considered to be in an extended shutdown condition when the reactor has been subcritical for at least two consecutive quarters. Plants in an extended shutdown should report PIs in accordance with the guidance provided in the current version of NEI 99-02.

0608-08 PI VERIFICATION

Because of the importance of PIs in the ROP as a source of information regarding performance upon which agency actions will be based, PI data must be reported accurately. Inspection Procedure 71151, "Performance Indicator Verification," shall be conducted to review licensees' PI data collection and reporting activities for adherence to pertinent guidance. Discrepancies with the performance indicator data collection and reporting or the actual data should be documented in accordance with IP 71151 and the requirements of Inspection Manual Chapter 0610*, "Reactor Inspection Reports."

During the initial year of implementation of the ROP, Temporary Instruction 2515/144, "Performance Indicator Data Collecting and Reporting Process Review," was conducted to provide a one-time verification that each reactor site has established an effective process for collecting and reporting PI data.

In preparation for initial implementation, licensees submitted a "best effort" collection of historical data. In recognition that some reporting errors would occur in this historical submission, the NRC has elected to exercise enforcement discretion associated with this submission in accordance with Section IX, "Inaccurate and Incomplete Information," of the "General Statement of Policy and Procedure for NRC Enforcement Actions." In addition, to allowing the licensees an opportunity to gain experience with the PI reporting guidelines during the first year of implementation, the NRC exercised discretion for reporting errors that occurred after the historical submission until January 31, 2001 for PI reporting errors that were not the result of willful, inaccurate data submission. Therefore, when reporting inaccuracies were identified during this period, the regions did not cite a level IV violation in accordance with 10 CFR50.9, "Completeness and Accuracy of Information."

08.01 Discrepant or Unreported PIs

In the event the NRC determines that major discrepancies exist in the PI data submitted by a licensee that causes the Agency to lose confidence in the licensee's ability to collect and report PI data accurately, the subject PI(s) will be determined to be discrepant. Examples of situations in which a PI would be considered to be discrepant may include, but are not limited to; (1) recurring discrepancies in the reported data; (2) recurring instances of incorrect interpretations of NEI 99-02; or (3) inadequate documentation of PI data.

When PI data has been determined to be discrepant or is not being reported by the licensee, IP 71150, "Discrepant or Unreported Performance Indicator Data," will be conducted. IP 71150 provides for the performance of selected inspection activity to compensate for the discrepant or unreported PI data. Regional management should coordinate activities in this area with IIPB. The selected inspections will be performed in addition to the baseline inspection. Once the licensee has corrected the root cause(s) of the discrepant or unreported data, and the NRC has verified that the licensee can collect and report PI data accurately, oversight of PI reporting will be conducted in accordance with IP 71151.

0608-09 QUESTIONS AND FEEDBACK

Questions from internal and external stakeholders regarding the PI Program are anticipated during the first year of implementation of the ROP and beyond. Also, as NRC and industry gain experience with the PI Program and the ROP, changes to existing PIs and thresholds, as well as development of new PIs, are expected.

The NRC has established a formal process to (1) address questions and feedback from internal and external stakeholders, (2) make changes to existing PIs and thresholds based on lessons learned, and (3) develop new PIs and associated thresholds. This formal process is provided in Exhibit 1, "PI Process For Addressing Feedback and Questions." The process consists of four major components. These are: input, evaluation, resolution, and closure.

The remainder of this IMC describes the formal process.

DRAFT

09.01 Input

NRC staff, industry, or the public may raise questions or provide feedback regarding an individual PI. Questions raised by industry personnel should normally be submitted to an NEI representative. These questions will be provided to the NRC at periodically conducted public meetings held between the NRC and NEI. Questions raised by the public or other stakeholders should be submitted via email to the Office of Public Affairs at opa@nrc.gov. Alternatively, questions can submitted in writing to: United States Nuclear Regulatory Commission, Office of Public Affairs, Washington D.C. 20555. Regardless of their origin, questions raised will be processed in accordance with the process described below.

When an NRC staff member has a question regarding PIs, the FAQs on the internal and external web should be checked to determine if guidance which addresses the question already exists. If referring to the FAQs does not address the question or if the staff member desires to provide feedback, he or she should fill out a feedback form, Exhibit 2, and submit it to IIPB. Submission of the feedback form allows the region and headquarters to ensure that the issue receives an appropriate and timely response. A PI Feedback Form can be down loaded from the internal ROP web page http://nrr10.nrc.gov/NRR/ROP_DIGITAL_CITY/ROP_digital_city.html. Feedback forms will be forwarded to regional management for review and response, as appropriate. All forms, including those for which the Region has responded, will then be forwarded to the PIPBCAL email mailbox or mailed to the Chief, IIPB (mail stop O7A-15).

Upon receipt, DIPM/IIPB will perform an initial screening of all questions and feedback. IIPB will assign a lead reviewer from the branch or the technical branch within DIPM with the responsibility in the area for which the issue is associated. The lead reviewer resolving the issue will forward a reply to the originator within 14 business days to acknowledge receipt of the form and to inform the originator of the PI tracking number. Similarly, NRC will acknowledge receipt of questions and feedback provided directly to the NRC from members of the public or from members of industry. This response will be in the form of a written correspondence. All follow-up questions should be directed to the lead reviewer.

09.02 Evaluation of Questions/Feedback

Those issues that require only explanation of the existing guidance will be immediately resolved. The lead reviewer will provide the originator with an explanation and the issue will be closed out in accordance with "Closure" (Section 9.05).

Questions or feedback that require modification to the guidance to clarify meaning or intent will be addressed in accordance with "Resolutions of Questions and Feedback not Requiring a PI Change" (Section 9.03).

Questions or feedback in which the resolution would require a new PI or a change to an existing PI or threshold will be addressed in accordance with "Resolutions of Questions and Feedback Requiring a PI Change" (Section 9.04) and subsequent steps.

09.03 Resolution of Question/Feedback Not Requiring A Change

The following steps will be performed to resolve questions or feedback that do not require a PI or threshold change:

a. DIPM and NEI will review the question, document it in the form of an FAQ, and develop a proposed response. DIPM will involve the appropriate regions and NRR technical staff when developing the proposed response.

b. NRC and NEI will discuss the issue in a public meeting in order to arrive at tentative approval for the question and its proposed response. Although it is desirable that a tentative approval be achieved by the close of the meeting in which the issue is first discussed, this portion of the process is iterative and could take several working meetings. In the event NRC and its stakeholders are unable to reach alignment on the issue being discussed, NRC will make the final decision. Also, in the event that the issue has been previously addressed, or no longer requires consideration, it may be withdrawn. Regardless of whether the tentative approval is achieved by conclusion of the meeting, NEI will enter new FAQs into a running log that contains draft FAQs (both generated by NRC and external stakeholders) and provide a copy of the electronic file to the NRC. The NRC will make the FAQs available to the public, industry and other stakeholders on the ROP internal and external web pages.

c. Following tentative approval, the FAQ will be held for a waiting period – normally until the next regularly scheduled meeting – to allow a final opportunity for internal stakeholders to review the proposed FAQ and provide any input.

d. At the conclusion of the waiting period, NRC and NEI will consider any final input provided and will issue final approval. IIPB will then place the approved FAQs on the internal and external web pages. IIPB will notify appropriate internal stakeholders of the resolution. NEI will notify the licensee of the updated FAQ.

e. NEI 99-02 will be updated periodically to incorporate approved FAQs.

09.04 Resolution of Question/Feedback Requiring A Change

Questions or feedback that raise issues which require more than clarification of reporting guidance or policy will be addressed as described below. Resolution may involve creating a new PI, changing an existing PI, changing a threshold for an existing PI, or changing an existing PI to reflect a unique plant design features. Each of the processes share common steps, but will be discussed separately.

Activities associated with developing PIs or making changes to existing PIs or thresholds can require significant NRC resources. Prior to expending significant resources, DIPM will reach a determination as to whether a proposed change to address the issue appears to be feasible, and therefore justified. For those changes that would clearly not be feasible, DIPM will conclude consideration of the change and provide a response to the originator that includes a rationale for not proceeding. The issue will subsequently be closed-out.

If the issue appears to be feasible, one of the four steps described below will be followed.

a. New PI

When an existing PI is not effective, is consistently difficult to report, or has the potential to be misleading or create unintended results, there may be a need to develop a new PI. The proposed PI should provide indication of licensee performance for the key attributes in the cornerstone(s) for which the existing PI was intended. These attributes were developed in the initial ROP conceptual stage and are documented in SECY 99-007, Recommendation for Reactor Oversight Process Improvements."

Once the need for a new PI has been determined and the scope of information the PI will cover has been identified, NRC or NEI will propose a definition for the PI, including draft reporting criteria. NRC will consider previous lessons learned and any stakeholder feedback in developing the proposed definition. The proposed PI will be discussed at a public meeting between NRC an NEI to develop an agreed upon definition. In the event NRC and its stakeholders are unable to reach alignment on the proposed PI, the NRC will make the final decision.

The proposed PI will be made available to internal and external stakeholders for comment via the NRC ROP web site. Following the comment period, NRC and NEI will review comments provided and make changes to the PI, as appropriate.

Early consideration should be given to the potential need for OMB Clearance for the new PI to ensure clearance processing will not adversely impact final PI implementation. The current OMB clearance for PI reporting expires on October 31, 2002, and allows additional PIs to be added when necessary. Thereafter, it is required to be updated by the Office of Chief Information Officer, Records Management Branch.

Following the development of the final proposed PI definition and reporting guidance, the NRC must determine the efficacy of the PI. The PI must be benchmarked against past industry performance data to determine whether the results obtained using the PI would be indicative of past plant performance concerns. If historical data is available, the NRC working with NEI, will collect the data. Using this data, the NRC and NEI will determine if the PI can (1) differentiate between plants perceived as superior, average, and poor performers, and (2) identify declining performance in a timely manner so that increased regulatory attention can be applied before performance becomes unacceptable. In the event that historical data is not available, the NRC and NEI will use best available information to judge (through use of an expert panel) the ability of the proposed PI to satisfy (1) and (2), above.

If the proposed PI cannot differentiate between plants perceived as superior, average, and poor performers or identify declining performance in a timely manner, so that increased regulatory attention can be applied before performance becomes unacceptable, the PI must be revised prior to proceeding or development efforts should be discontinued. Once the PI has been successfully benchmarked, NRC and NEI will consider whether the PI will provide information that is not currently being developed and adds benefit commensurate with the reporting burden. In the event the PI does not provide information that would make its continued development and implementation beneficial, it must be revised or it will be discontinued.

The NRC and NEI will conduct a pilot test using a sample of plants that are willing to collect data using the proposed PI(s) in addition to continuing to provide data on the existing PIs. The purpose of this pilot reporting is to conduct a real-time test of the proposed guidance, establish thresholds, and the determine the effectiveness of the proposed PIs. When the pilot has been completed, NRC will provide an opportunity for the industry, public, and other stakeholders to provide feedback. This feedback along with lessons learned from the pilot will be used to modify the proposed PI and its thresholds.

In conjunction with adding a PI, NRC will consider whether changes to the baseline Inspection Program are warranted to eliminate potential overlap or ensure coverage of key attributes.

After NRC and NEI have agreed on final changes to the proposed PI and thresholds, NRC or NEI may conduct training, as deemed necessary. NEI will revise NEI 99-02. IIPB will issue a Regulatory Information Summary (RIS) to inform stakeholders of the new PI change and reporting criteria. Additionally, the RIS will be placed in NRC's Public Document Room and on the external web-site, http://nrr10.nrc.gov/NRR/OVERSIGHT/ASSESS/INDEX.html. , which can be accessed from the Inspection Manual of Agency Wide Applications. Additionally, IP 71151 will be revised to reflect the new PI. NRC will approve its use for industry-wide PI reporting through issuance of a RIS.

b. Changes To An Existing PI

The process for making a change to an existing PI is similar to creating a new PI. Like the initial steps in creating a new PI, NRC must ensure that the revised PI will provide indication of licensee performance for the key attributes in the cornerstone(s) for which the existing PI was intended.

The NRC will conduct public meetings with NEI and other stakeholders to discuss and reach agreement on the proposed change, including the PI definition and reporting criteria. The proposed PI change will be made available to internal and external stakeholders for comment via the NRC ROP web site. Following the comment period, NRC and NEI will review comments provided and make changes to the PI, as appropriate. This process is iterative and allows all stakeholders an opportunity to contribute to the resolution, and the NRC/NEI working group to consider other proposed alternatives.

Once the proposed change has been approved, the NRC and NEI will identify a representative sample of plants that are willing to pilot test the proposed change by collecting data using the modified PI(s), which continuing to provide data to the NRC on the existing PIs. The purpose of pilot reporting is to conduct a real-time test of the proposed guidance, review and revise the thresholds if needed, and ensure the effectiveness of the resultant PI. When the pilot has been completed, NRC will provide an opportunity for the industry, public, and other stakeholders to provide feedback. This feedback along with lessons learned from the pilot will be used to modify the proposed PI change.

After NRC and NEI have agreed on final changes to the PI, NRC or NEI may conduct training, as deemed necessary. NEI will revise NEI 99-02 accordingly. IIPB will issue a RIS to inform stakeholders of the new PI change and approve the use of the new PI. Additionally, the RIS

will be placed in NRC's Public Document Room and on the external web-site, http://nrr10.nrc.gov/NRR/OVERSIGHT/ASSESS/INDEX.html. , which can be accessed from the Inspection Manual of Agency Wide Applications. Additionally, IP 71151 will be revised to reflected the new PI.

c. Change Threshold

As experience is gained in implementing the ROP, some thresholds may need to be adjusted based on lessons learned. This practice of threshold adjustment is not intended to establish continually rising licensee performance expectations, but rather to ensure that the initial thresholds, some of which were established without the benefit of actual industry performance data, are performing as intended.

When lessons learned from feedback indicates that a revision to an existing threshold is needed, NRC and NEI will review existing PI data and compare it to the criteria used to establish the initial set of the performance indicators. As described in SECY-99-007, the initial thresholds were established by considering risk and regulatory response to different levels of licensee performance. In deciding on the threshold values, several criteria were used. These include: (1) capability of accounting for performance indicated by risk-informed inspection findings; (2) ability to provide sufficient differential to allow meaningful differentiation in performance and limit false positives (e.g. allow an order of magnitude in the risk differential between thresholds); and (3) ability to allow sufficient margin between nominal performance bands to allow for licensee initiatives to correct performance problems before reaching escalated regulatory involvement thresholds, and sufficient margin between thresholds that signify initial declining performance to allow for both NRC and licensee diagnostic and corrective actions to be effectuated.

NEI performed a benchmarking analysis on a set of eight plants that they categorized as excellent, average, or declining performers, plus eight NRC watch-list plants. Since NEI did not have unavailability data at the time, they used Safety System Failures from the NRC PI Program as a surrogate. Plants provided monthly or quarterly data from July 1995 through June 1998 for RCS activity, RCS leakage, and containment leakage to NEI.

In cases where there is little or no historical experience (e.g. Physical Protection or Occupational Radiation Safety), there would be a need to readjust the guidance or the thresholds. The thresholds for several PIs were modified based on information obtained from the historical PI submission and described in SECY-00-0049. Where necessary, further collection of data will be gathered in order for the staff to establish thresholds or confirm the validity of problem indicators.

Once the threshold change has been proposed by the NRC, the NRC/NEI working group will meet in a public forum to discuss and reach an agreement on the proposed threshold change, will be made available to internal and external stakeholders for comment via the NRC ROP web site. Following the comment period, NRC and NEI will review comments provided and make changes, as appropriate. This process is iterative and allows all stakeholders an opportunity to contribute to the resolution, and an opportunity to consider other proposed alternatives. In the

event NRC and its stakeholders are unable to reach alignment on the proposed threshold change, the NRC will make the final decision.

IIPB will issue an RIS to inform stakeholders of the threshold change. The RIS will be forwarded to the regional Directors of Reactor Projects, Reactor Safety, and Plant Support; inspectors; and NEI. Additionally, the RIS will be placed in NRC's Public Document Room and on the external web-site, http://nrr10.nrc.gov/NRR/OVERSIGHT/ASSESS/INDEX.html., which can be accessed from the Inspection Manual of Agency Wide Applications.

For the threshold that has been changed, a new threshold must be recalculated; thus, the germane PI data is retroactive. Plants affected by the change should modify the threshold in accordance with the change.

d. Unique PI

With 103 reactors and 4 owners groups, plants may have unique design features that make compliance with the data reporting criteria established in NEI 99-02 impossible, impractical, or ineffective.

In such cases, NRC and NEI will form a working group that includes representatives of the affected licensees to develop unique criteria to accommodate plant type differences. If historical data is available, it will be collected. When historical data is unavailable an expert panel will be assembled to identify appropriate thresholds based on experience. NRC and NEI will establish new thresholds. The NRC will then follow the remainder of the guidance outlined in Section C, Change Threshold, to complete this process.

09.05 Closure

Once the issue has been resolved, the lead reviewer will notify the originator of the final response. This notification will normally occur via email and within 14 business days after NRC has reached a resolution. The completion date will be entered into the PI tracking system and the issue will closed out.

-End-

0608-10 PI REFERENCES

Management Directive 8.13, "Reactor Oversight Process"

SECY-99-007, "Recommendations For Reactor Oversight Process Improvements"

SECY-99-007A, "Recommendations For Reactor Oversight Process Improvements (Follow-up to SECY-99-007)"

SECY-00-049, "Results Of The Revised Reactor Oversight Process Pilot Program"

Temporary Instruction 2515/144, "Performance Indicator Data Collecting and Reporting Process Review"

Inspection Procedure 71151, "Performance Indicator Verification"

Inspection Procedure 71150, "Discrepant or Unreported Performance Indicator Data"

Regulatory Information Summary 99-06, "Voluntary Submission Of Performance Indicator Data" (collecting and reporting historical data)

Regulatory Information Summary 2000-08, "Voluntary Submission Of Performance Indicator Data" (collecting and reporting data reflecting plant performance during full implementation of revised reactor oversight process)

General Statement of Policy and Procedure for NRC Enforcement Actions

Manual Chapter 0350, "Staff Guidelines For Assessment and Review Of Plants That Are Not Under The Routine Reactor Oversight Process"

Web-site For Frequently Asked Questions: http://NRR/OVERSIGHT/ACCESS/FAQs_by_pi_pdf

ROP Web-site: http://nrr10.nrc.gov/NRR/ROP_DIGITAL_CITY/ROP_digital_city.html

DRAFT

PERFORMANCE INDICATORS
Process for Addressing Questions and Feedback

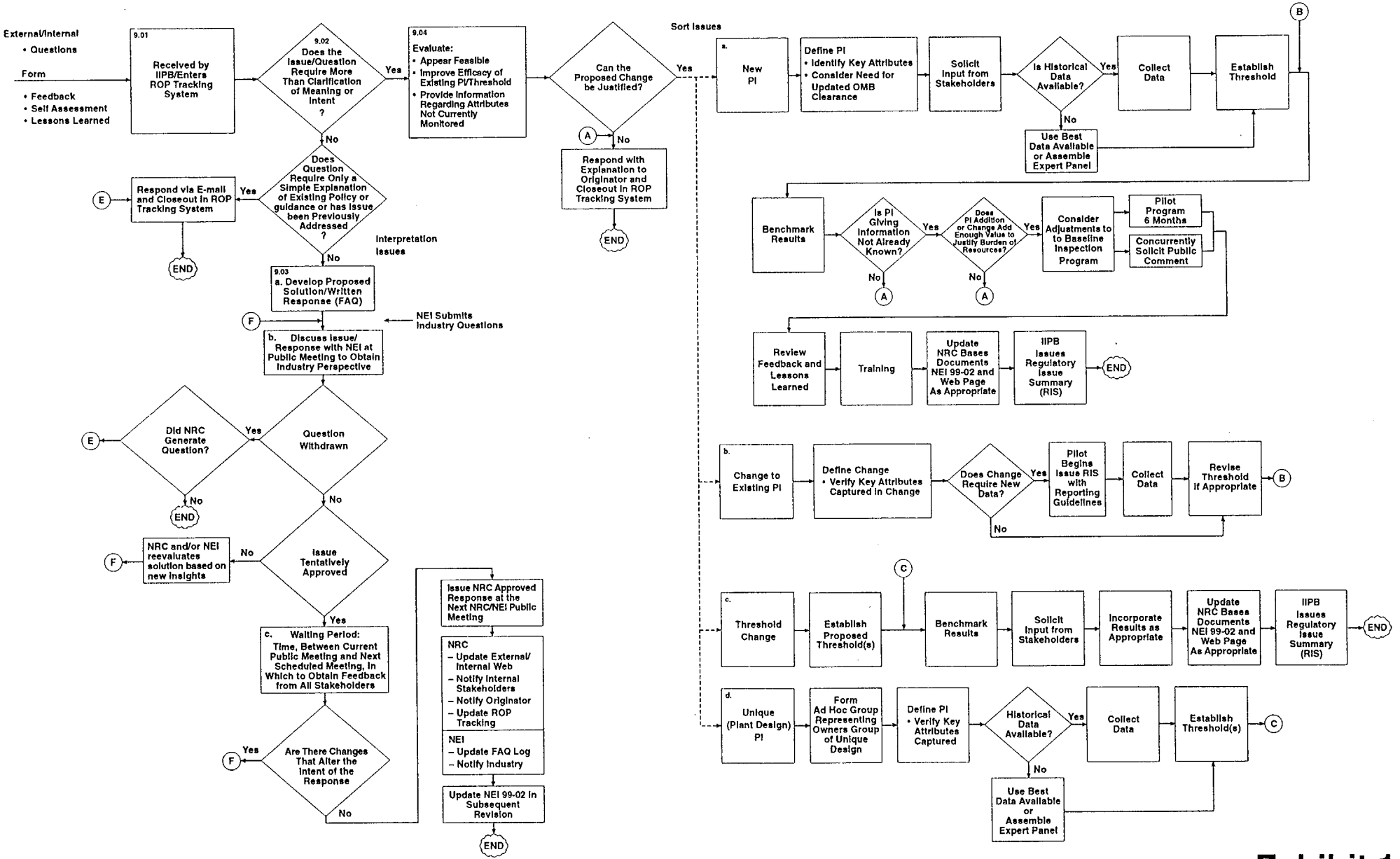


Exhibit 1

Reactor Oversight Process Feedback No.:_____
(Assigned by IIPB)
Regional No. (Optional):_____

Instructions: Send completed form to your supervisor or regional DRP branch chief. The region sends form to e-mail address PIPBCAL. In leu of an e-mail, a hard copy of the form, including the regional branch chief's review, may be sent to Chief, IIPB, at mail stop O7-A15.

Document No.: _____ Attachment No. (if applicable): _____

Topic:

Inspection	☐	SDP	☐	PIs	☐
Assessment	☐	Enforcement	☐	Other	☐

Statement of Problem: (Please limit form to one issue.)

Comments/Recommendations: (If describing a PI interpretation concern, first state the licensee's interpretation, then the region's position. Recommendations are also welcome.)

draft

Reactor Oversight Process Feedback No.:_____
(Assigned by IIPB)
Regional No. (Optional):_____

Originator:

Name/Email: _____ Phone No.: _____ Region/Div: _____

Plant Name (if applicable): _____

Date Submitted: _____

Name of NRR staff contacted previously (if applicable) _____

Regional Review:

Reviewed by: _____ Date: _____

Regional Action:

Region resolves and sends to IIPB for information ☐ Send to IIPB for resolution ☐

Regional Remarks/Resolution:

_____

Lead Reviewer:

Name/E-mail: _____ Phone No: 301-415-

Date Received: _____

Initial Action (Place details in Remarks below):

Date of Initial Action: _____

Program Office Resolution:

Final Action (Place details in Remarks below):

Date of Final Action: _____

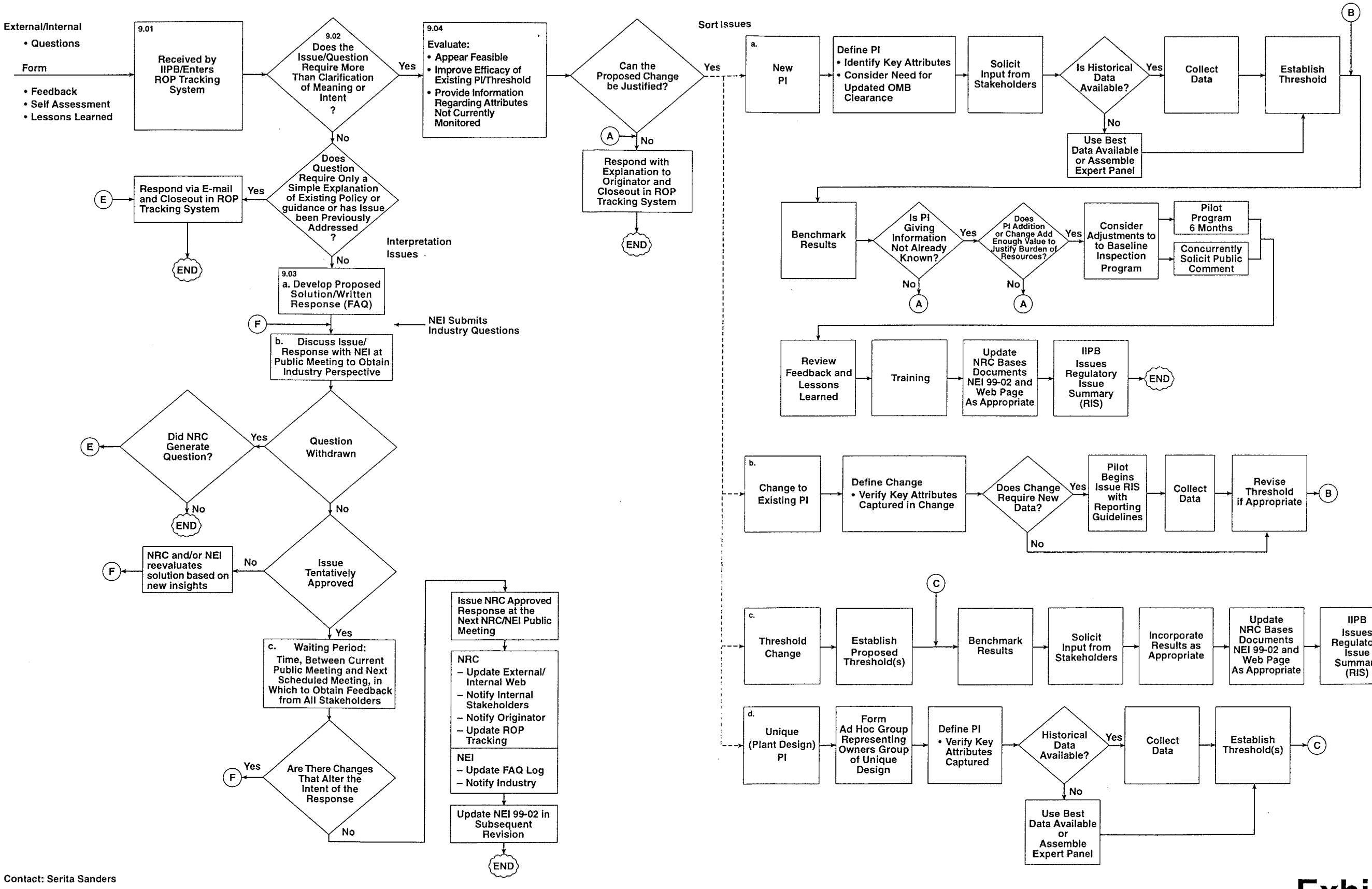
Reviewer's Section Chief Approval: _____ Date: _____

IIPB Task Area Lead Review: _____ Date: _____

Remarks:

draft

PERFORMANCE INDICATORS
Process for Addressing Questions and Feedback



Contact: Serita Sanders

Exhibit 1

10/31/00

ROP PERFORMANCE METRICS

October 12, 2000

Attachment 5

PERFORMANCE INDICATORS

O. OBJECTIVE

OP1 The PI Values Obtained by Different Users Are the Same, Given the Same Conditions. Measured by:

a. Independent verification of PI using IP 71151, "PI Verification." Count the number of significant deficiencies that cross thresholds

How: Regions conduct PI verification. If regions find a discrepancy that crosses threshold, regions record in IR and PIM. Regions report quarterly to IIPB – across all PIs.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison and to establish acceptable range of variability.

Lead: IIPB

Graphic Display: Quarterly national rolling sum histogram; x axis - quarterly timeline, y axis - number of discrepancies.

b. Count the number of discrepancies in reporting plus the number of questions regarding interpretations (internal and external FAQs) — metric is sum of discrepancies + FAQs

How: Utility submits change reports to Web page. IIPB collects number of change reports submitted quarterly. IIPB counts the number of internal and external FAQs quarterly.

Success: Expect low numbers (but not as low as OP1a), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB

Graphic Display: Quarterly national rolling sum histogram; x axis - quarterly timeline, y axis - sum of discrepancies and questions.

R. RISK-INFORMED

RP None

U. UNDERSTANDABLE

UP1 They Have a Well-defined, Consistent Basis - See OP1

a. See OP1a

b. See OP1.b

P. PREDICTABLE

PP1 The PI Values Obtained by Different Users Are the Same, Given the Same Data Inputs - See OP1. Measured by:

a. See OP1.a
b. See OP1.b

PP2 PIs Stable Over Time. Measured by:

a. Count the number of changes that complete/exit the flow path of the change process

How: IIPB tracks number of NRC Regulatory Issues Summaries issued quarterly.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB

Graphic Display: Annual national histogram; x axis - annual timeline, y axis - number of changes.

M. MAINTAINS SAFETY

MP1 Provide Timely Indication of Declining Safety Performance. Measured by:

a. Track/trend PIs that cross multiple thresholds (i.e., green to yellow or red) , evaluate and characterize (why, should it?) to allow timely interaction

How: Regions report quarterly on numbers of multiple crossed thresholds.

Success: Expect low numbers (near zero), stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB

Graphic Display: Annual national histogram; x axis - annual timeline, y axis - number of times multiple thresholds crossed.

MP2 Provide an Incentive for Licensees to Make Prudent Decisions, and Minimize Incentives for Licensees to Take Actions That Have the Potential to Adversely Impact Plant Safety. Measured by:

Performance Indicators

a. Reports of unintended consequences of PIs from feedback forms and surveys

How: Regional/resident inspectors send feedback forms describing unintended consequences to IIPB (IIPB may direct use of feedback forms when receive phone inquiry). IIPB tracks annually.

Success: Expect low numbers, stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB

Graphic Display: Annual national histogram; x axis - annual timeline, y axis - number of reports of unintended consequences from feedback forms and surveys.

b. Survey licensees regarding PIs driving undesirable decisions

How: Add question to overall survey administered to licensees

Success: Expect low numbers of unintended consequences reported, stable or decreasing trend. First year of data used to benchmark for future comparison.

Lead: IIPB

Graphic Display: Annual national histogram; x axis - annual timeline, y axis - number of reports of PIs driving undesirable decisions from surveys.

E. EFFICIENT, EFFECTIVE, AND REALISTIC

EP1 Reported Accurately - See OP1

a. See OP1.a
b. See OP1.b

EP2 Information Is Provided in a Timely Manner. Measured by:

a. Track late PI postings on NRC's external web site

How: IIPB counts number of late PI postings on NRC's external web site.

Success: PIs posted on external web site within 5 weeks of end of each quarter.

Lead: IIPB

Graphic Display: National histogram by quarter; x axis - timeline, y axis - number of late submissions; number of late postings to web site.

Performance Indicators

EP3 Process Stable over Time - See PP2

a. See PP2.a

EP4 Strategic Plan Safety Objectives Are Met - See MP1

a. See MP1.a

EP5 Provide Timely Indication of Declining Safety Performance - See MP2

a. See MP2.a & MP2.b

EP6 Provide an Incentive for Licensees to Make Prudent Decisions, and Minimize Incentives for Licensees to Take Actions That Have the Potential to Adversely Impact Plant Safety - See MP3

a. See MP3.a
b. See MP3.b

C. ENHANCES PUBLIC CONFIDENCE

CP If all criteria of the attributes are met

CP1 Accurate, Understandable Information Is Provided in a Timely Manner

a. See OP1.a
b. See OP1.b
c. See EP2.a

B. REDUCES UNNECESSARY REGULATORY BURDEN

BP1 Licensees Perceive Appropriate Overlap of Inspection Program and PIs. Measured by:

a. Survey stakeholders perceptions of overlap between PIs and inspection

How: Add question to overall internal and external surveys administered to licensees and inspectors

Success: Low number of negative comments, declining/stable trends in numbers of negative comments received.

Lead: IIPB

Graphic Display: Annual national histogram; x axis - annual timeline, y axis - number of negative comments from surveys.

Performance Indicators

BP2 Reporting Conflicts Are Reduced. Measured by:

a. Survey licensee regarding perceived overlap between reporting requirements, such as INPO, WANO, and Maintenance Rule

How: Add question to overall survey administered to licensees

Success: Low number of negative comments, declining/stable trends in numbers of negative comments received.

Lead: IIPB

Graphic Display: Annual national histogram; x axis - annual timeline, y axis - number of negative comments.

INSPECTION PROGRAM

O. OBJECTIVE

OI1 Findings and Conclusions in Inspection Reports Are Based on Facts Documented in the Reports.

a. Number of inspection reports that document findings in accordance with program guidance.

How: Audit inspection reports to program requirements for documenting Green, greater than Green, and no color findings (IP's, 0610*, 2515), count the number of reports that contain findings not meeting the program requirements.

Success: Trend in number of reports meeting criteria steady or increasing; use first year to establish benchmark for comparison

Lead: IIPB

Graphic Display: Program assessment: Pie chart, percentage of acceptable inspection reports to total reports reviewed.

Regional assessment: Bar chart, percentage of acceptable inspection reports to total reports reviewed. Ordinate: calendar quarter. Abscissa: percentage, by region.

R. RISK INFORMED

RI1 Inspection Findings are Related to Risk

a. See OS1.b
b. See OI1.a
c. See ES5.a
d. See ES5.b

RI2 Inspection Program Uses Risk Insights

a. Number of changes to inspection program documents relating to improving risk informed aspects

How: Review all changes to baseline inspection program and count the number of changes that relate to risk-informing the inspection.

Success: Relatively few significant changes, trend stable or declining

Lead: IIPB

Graphic Display: Bar chart, number of program documents changed. Ordinate: calendar quarter. Abscissa: number of documents changed.

b. Number of "no color" findings in IR's IAW program guidance.

How: Audit inspection reports to verify proper classification of no color issues in accordance with program requirements for documenting inspection findings, counting the number of reports that properly characterize no color green findings.

Success: Trend of percentage of reports meeting criteria steady, use first year to establish benchmark for comparison

Lead: IIPB

Graphic Display: Program assessment: Pie chart showing percentage of IR's with no color findings that meet requirements for documenting below green findings.

Regional assessment: Bar chart, percentage of inspection reports that properly document "no color" findings to number of reports with "no color findings." [Note: regions to document all items that don't fit framework as "no color" findings.] Ordinate: calendar quarter. Abscissa: percentage by region.

RI3 **Inspection Areas Looked at (The Scope and Frequency of the Inspectable Areas Are Appropriate–inspectable Areas Are Risk-significant, Nothing Is Missing, and There Is Nothing Extraneous)**

a. Number of changes to baseline inspection program documents that affect scope or frequency of inspections.

How: Review all issued changes to baseline inspection procedures and count those documents that have their scope or frequency of inspection changed, and count new inspectable areas that relate to risk-informing the inspection.

Success: Relatively few significant changes, trend stable or declining

Lead: IIPB

Graphic Display: Bar chart, number of documents changed and added to program. Ordinate: calendar quarter. Abscissa: number of documents.

U. UNDERSTANDABLE

Measured by overall ROP metrics

P. PREDICTABLE

PI1 **The Inspection Program Is Implemented as Defined—Inspections Are Pre-defined and Implemented as Planned.**

Inspection Program

a. Rates of completion of baseline inspections across regions

How: Analyze RPS data on completion of baseline inspection procedures. Percentage of completed IP's to scheduled IP's for that quarter. Also assess cumulative completed vs. scheduled IPs.

Success: Track initial year, then set goals for % completion rates; 100% completed at end of inspection cycle.

Lead: Regions

Graphic Display: Program assessment: bar chart, cumulative percentage of IP's completed by calendar quarter. Ordinate: calendar quarter. Abscissa: percentage nationally

Regional assessment: bar chart, cumulative percentage of IP's completed by calendar quarter. Ordinate: calendar quarter. Abscissa: percentage by region.

b. Proportion of inspection schedule changes and justifications for the changes

How: Collect number of activities, number of changes, and reasons for such changes.

Success: Track and trend changes. For larger inspections (SSDI, Fire, PI&R), any change in time should be captured. For smaller inspections, changes of >2 weeks should be captured. Categorize by reasons for changes such as needs of NRC (e.g., qualified inspectors not available, etc.), conflict with INPO, or request by plant to have key employees available.

Lead: Regions

Graphic Display: Program assessment: bar chart, percentage of scheduled activities changed for reasons other than reg impact. Ordinate: calendar quarter. Abscissa: percentage nationally. Bar chart showing number of changes by reason for change. Ordinate: reason. Abscissa: number nationally.

Regional assessment: bar chart, percentage of scheduled activities changed for reasons other than reg impact. Ordinate: calendar quarter. Abscissa: percentage by region. Bar chart showing number of changes by reason for change. Ordinate: reason. Abscissa: number by region.

PI2 Scope of Inspection Program as Implemented Is Consistent Across Regions.

a. Comparison of frequencies of baseline inspections, sample sizes, and Direct Inspection Effort (DIE) hours to program requirements by inspector type (DRS, resident)

How: Collect and analyze RPS data (number of samples, regular hours, overtime hours) for each inspection procedure. Collect preparation/documentation time.

Success: No significant deviations (explore reasons for such deviations)
(1) Track and trend OT for baseline inspection program and reasons for OT, first year data to establish baseline
(2) Track and trend prep, doc, travel to establish baseline, effects on budgeted resources.

Lead: IIPB

Graphic Display: Regional assessment: Bar charts showing deviations of regional averages from program estimates (or national averages) for samples, DIE. Discussion of significant outliers.

b. Number and justifications for approved deviations from the baseline inspection program

How: Collect number of requests from regions to change frequency or sampling, number of approvals, and reasons for such requests.

Success: Track and trend. Expect steady or declining number of requests, infrequent–use first year to develop base.

Lead: IIPB, Regions

Graphic Display: Bar chart, total number of approved requests

M. MAINTAINS SAFETY

MI1 Inspection Areas Looked at (The Scope and Frequency of the Inspectable Areas Are Appropriate–Inspectable Areas Are Risk-significant, Nothing Is Missing, and There Is Nothing Extraneous).

a. See RI3.a

E. EFFICIENT, EFFECTIVE, AND REALISTIC

EI1 Inspection Resources Are Consistently Applied Within Program Guidelines.

a. See PI2.a

EI2 Resources Available Are Adequate to Conduct the Inspection Program (Equals Sufficient Number of Properly Trained Inspectors to Complete the Baseline Inspection Program).

a. Compare actual FTE used to implement baseline inspection program to estimated FTE to complete baseline inspection program.

Inspection Program

How: Analyze RPS data, calculate number of FTE used to implement baseline inspection program to estimated FTE to complete baseline inspection program.

Success: First year of implementation will be used to refine the estimated number of FTE necessary to implement the baseline inspection program.

Lead: IIPB

Graphic Display: Program assessment: bar chart displaying total estimated FTE compared to actual FTE.

Regional assessment: bar chart displaying regional total estimated FTE to regional actual FTE.

b. Track and trend contracted inspection support

How: Track and trend contractor support dollars by discipline/IP/region

Success: Track and trend

Lead: IIPB

Graphic Display: Program assessment: Bar chart, total contractor support dollars by IP for each calendar quarter. Ordinate: calendar quarter. Abscissa: dollars by each IP.

Regional assessment: Bar chart, total contractor support dollars by IP for each calendar quarter. Ordinate: calendar quarter. Abscissa: dollars by each IP by region.

c. Changes to inspection schedules and reasons for the changes by discipline

How: Collect number of activities, number of changes, and reasons for such changes. Count the number of changes because qualified inspectors were unavailable.

Success: Small number, declining trend in changes because of lack of qualifications

Lead: Regions

Graphic Display: Program assessment: Bar chart, number of changes. Ordinate: calendar quarter, region, or 1245 category. Abscissa: number of schedule changes for lack of qualified inspectors.

Regional assessment: Bar chart, number of changes. Ordinate: calendar quarter, region, or 1245 category. Abscissa: number of schedule changes for lack of qualified inspectors by region.

Inspection Program

EI3 The Inspection Program Is Timely (Applies to Inspection Reports, Inspections, TI's).

a. Number of IR's issued within program goals

How: Obtain RPS data on number of reports issued and number issued within timeliness goals.

Success: Number/percent of reports issued within program goals steady or increasing

Lead: IIPB

Graphic Display: Program assessment: bar chart, number (or percentage) of reports issued in time, by quarter. Ordinate: calendar quarter. Abscissa: percentage of reports.

Regional assessment: bar chart, number (or percentage) of reports issued in time, by quarter. Ordinate: calendar quarter. Abscissa: percentage of reports by region.

b. Number of TI's completed by TI completion date.

How: audit time to complete TI's by region. Compare completion status in RPS to TI requirements. Regions to report closure of TI's within time goals.

Success: Number/percent of TI's completed within TI requirements steady or increasing

Lead: IIPB, Regions

Graphic Display: Bar chart, number of TI's completed in time by region. Ordinate: region. Abscissa: number of TI's

EI4 The Inspection Program Is Stable

a. Number of change notices for significant program changes

How: Track and trend number of C/Ns for IMC 2515 program affecting scope, schedules, training, resources.

Success: Track and trend. Expect steady or declining trend.

Lead: IIPB

Graphic Display: Bar chart, number of significant changes to inspection program by calendar quarter. Ordinate: calendar quarter. Abscissa: number of change notices.

C. ENHANCES PUBLIC CONFIDENCE

CI1 All Other Metrics and Criteria Have Been Essentially Met

CI2 Public Communication Is Timely and Accurate

a. Timeliness of posting inspection results on the web and availability via ADAMs.

How: IIPB post inspection reports to external web within timeliness goals using electronic version of letters entered into ADAMS by the regions. IIPB post PIM entries to external web using data entered into RPS by the regions. IIPB record number of inspection reports not available in ADAMS and number of PIM entries not updated in RPS. Also record number of inspection reports and PIMs not posted to the external web within goals.

Success: IIPB posts inspection reports that were issued in previous quarter using electronic version in ADAMS, and their PIM entries from RPS, to the external web within 5 weeks after the end of each quarter. IIPB posts additional inspection reports and PIMs issued after the end of the quarter but prior to the quarterly review within 7 weeks after the end of each quarter.

Lead: IIPB

Graphic Display: Bar chart of percentage of timely updates by calendar quarter. Ordinate: calendar quarter. Abscissa: percentage of timely updates by region.

b. Number of inaccuracies (PIMs, IR's, PI's) on Web site

How: Periodically sample information on Web site, collect number of times and reasons for regions changing PIMs or IR's (accuracy, new information).

Success: Track and trend

Lead: IIPB, Regions

Graphic Display: Bar chart of number of changes due to errors in reports or Web page. Ordinate: calendar quarter. Abscissa: number of error corrections by region.

B. REDUCES UNNECESSARY BURDEN

B1 Industry perspectives:

a. Measured by overall ROP metrics.

Inspection Program

INSPECTION PROGRAM ASSESSMENT ACTIVITIES

Audit inspection reports

Collect feedback from inspectors, regions, licensees, public

Track changes to inspection program and reasons for changes

Analyze RITS data (regular, OT, DIE, other activities), site visits for outliers

Analyze RPS data (number of samples)

Collect changes to inspection schedules and reasons for changes

Analyze requests for deviations to program

Analyze inspector skill sets compared to program scope

Analyze contracted inspection support

Track timeliness of program documents (IR's, TI's, CN's, Web posting)

Surveys (FRNs, others)

REGIONAL DATA NEEDS

Number of times and reasons for changing inspection schedules

Number of requests from licensees to change schedule and how many accommodated

Transmitting licensee feedback

Number of times and justifications for deviating from baseline program

Keeping track of licensee challenges to compliance with program

Keeping track of comments on accuracy of IR's and PIM's posted on WEB

Reporting IR and TI timeliness

SIGNIFICANCE DETERMINATION PROCESS (SDP)

O. OBJECTIVE

OS1 SDP outcomes are tied to clear standards as measured by:

a. Number of SDP packages that are returned to the region by SDP panel due to not meeting established standards

How: Can be accomplished by adding a block to SDP panel form indicating rejection due to not meeting established standards (which may include lack of technical basis of fact in documentation provided).

Success: Low percentage overall w/ steady or declining trend. First year of data used to benchmark for future comparison. Will define "low" after first data set collected.

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of rejections. Expect low numbers, however, could divide into cornerstone or by region if significant contribution seen during analysis.

Other Areas: Understandable, Effective & Efficient

b. Independent Audit of green findings agrees that the selected findings meet established standards.

How: NOTE: Design a single audit process to include elements noted in all subsequent metrics (i.e., see US1a, PS1a, MS1a, ES2a). Independent reviewer given inspection reports containing a representative (cross-regional) selection of green findings. Sample size selected for 95% confidence (for all audit samples).

Success: 95% confidence factor - Yes in all cases. Must explain why if not.

Lead: DSSA/SPSB (reactor); DIPM/IOLB(non-reactor)

Graphic Display: None

Other Areas: Understandable, Effective & Efficient

R. RISK-INFORMED:

The SDP will be considered to be risk-informed by design, however, some metrics may provide insights. See US1.a, US1.b, MS1, ES5.a and ES5.b.

U. UNDERSTANDABLE (SCRUTABLE):

US1 All Information Needed to Reach a Conclusion, Including the Basis for Any Deviations, Is Available. Measured By:

a. The degree to which an auditor can trace through the available documentation and reach the same result

How: Independent reviewer given inspection reports & transmittal documents (for green findings) [SeeOS1b re 95% confidence factor for sample size] and SDP panel packages (for >green) [100% sample size] (Same as PS1a)

Success: Yes in all cases - must explain why if not.

Lead: RES for >green
DSSA/SPSB(reactor); DIPM/IOLB(non-reactor) for green

Graphic Display: None

Other Areas: Predictable (also primary), Risk Informed, Effective & Efficient

b. Stakeholder feedback indicating ability/inability to reconstruct SDP outcomes

How: Federal Register Notice, NRC sponsored survey (OMB clearance required), NEI blind survey of industry. Develop specific quantitative survey question.

Success: Trend of stable or increasing perception of issue over time

Lead: IIPB

Graphic Display: Two graphs to present entire picture (2 could be superimposed over 1).

1) Histogram: x-axis - time line by year; y-axis - numbers of respondents (Alternate: y-axis % respondents). One block would indicate # of positive responses, second would indicate # of negative responses. Could include survey used during pilot testing.
2) Trend line: x-axis - time line by year; y-axis survey scale (Lickert scale of 1 -5). One trend line would indicate average response, second would indicate median.

Other Areas: Predictable (also primary), Risk Informed, Effective & Efficient

US2 Inspection Staff Is Comfortable/proficient Using the SDP Tool and Find Value in Using it. Measured by:

a. Trending inspector and SRA feedback over time

How: Internal Survey. Develop specific quantitative survey questions focused on 1) comfortable and 2) finding value.

Success: Positive trend

Lead: IIPB/Regions

Graphic Display: Two graphs to present entire picture (2 could be superimposed over 1).

1) Histogram: x-axis - time line by year; y-axis - numbers of respondents (Alternate: y-axis % respondents). One block would indicate # of positive responses, second would indicate # of negative responses.
2) Trend line: x-axis - time line by year; y-axis survey scale (Lickert scale of 1 -5). One trend line would indicate average response, second would indicate median.

Other Areas: Effective & Efficient (also primary)

P. PREDICTABLE

PS1 SDP Results Can Be Reproduced, Given the Same Information. Measured by:

a. Same as US1.a

PS2 Standards and Processes Remain Stable over Time. Measured by:

a. The number of substantive change notices issued on program guidance, tables, or worksheets.

How: Change notice shall have block noting "How many a) editorial, b) due to errors in worksheets or not reflecting plant design or operating practices (see C3a), or c) substantive (defined as anything other than a, b, or for purposes of clarification)

Success: Trend number of changes vs threshold. Collect data 1st year to establish threshold.

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of significant changes (c). Trend line superimposed. Expect low numbers, however, could divide into cornerstone.

Other Areas: Understandable, Maintain Safety, Effective & Efficient

PS3 The Reactor SDP Tools Reflect Current Plant Design and Licensee Operating Practices. Measured by:

a. Tracking the number of worksheet changes due to errors in the worksheets as a result of not reflecting plant design and operating practices.

How: SDP worksheet change notice originator will be required to identify reason for change: i.e, change due to recent modifications/other significant issue or change due to not reflecting current operating practice or editorial change, etc. [Collected in conjunction with PS2.a (number of changes)]
- includes pre-screening worksheet

Success: Trend vs threshold. Collect data 1st year to establish threshold.

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of changes. Trend line superimposed. Expect low numbers, however, could divide into peer groups or by region.

Other Areas: Understandable, Maintain Safety, Effective & Efficient

PS4 SDP Results of the Same Color are Perceived to Translate to the Same Level of Concern for All Cornerstones. Measured By:

a. Observing trends in survey

How: NRC sponsored survey (OMB clearance required), NRC internal survey, NEI blind survey of industry. Quantitative survey question also asking for examples of where translation does not occur.

Success: Trend of stable or increasing perception of issue over time

Lead: IIPB

Graphic Display: Two graphs to present entire picture (2 could be superimposed over 1).

1) Histogram: x-axis - time line by year; y-axis - numbers of respondents (Alternate: y-axis % respondents). One block would indicate # of positive responses, second would indicate # of negative responses.

2) Trend line: x-axis - time line by year; y-axis survey scale (Lickert scale of 1 -5). One trend line would indicate average response, second would indicate median.

Other Areas: Effective & Efficient

M. MAINTAINS SAFETY:

The SDP will be considered to maintain safety if all other goals are met and if:

MS1 The SDP Focuses NRC and Licensee Attention on Safety-significant Issues. Measured by:

a. Tracking the numbers of over-conservative and non-conservative SDP results.

How: Over-conservative: See question OS1a - panel form should indicate over-conservative result.
Non-conservative: Audit by DSSA/DIPM of a representative sample of green findings (See OS1b). Quarterly report.

Success: Over-conservative: Steady or decreasing trend - will track 1st year for possible threshold setting.
Non-conservative: Target Goal = zero from sample. Any identified will require adjustment of process. After 1st year expect a steady decrease.

Lead: Over-conservative - IIPB
Non-conservative - DSSA/SPSB(reactor); DIPM/IOLB(non-reactor)

Graphic Display: Over-conservative: Histogram: x-axis is time line by quarter; y-axis = number of over-conservative results (by color). Trend line superimposed. Expect low numbers, however, could divide into cornerstone or by region.
Non-conservative: None - report by exception.

Other Areas: Effective & Efficient (also primary), Risk Informed, Enhance Public Confidence

E. EFFICIENT, EFFECTIVE, AND REALISTIC

ES1 The Resources (Direct Charges and Support Activities) Expended Are Appropriate to the Benefit (Significance of Issues Identified). Measured by:

a. Tracking the number of times the NRC must interact with the licensee to produce the desired result

How: 1) Count number of docketed submittals per finding and 2) Count number of regulatory conferences per non-green finding

Success: 1) Track and trend (steady or declining) and 2) Track and trend; goal for regulatory conferences: one/finding (may be greater for red)

Lead: Regions (quarterly report)

Graphic Display: 1) Histogram: x-axis is time line by quarter; y-axis = number of docketed submittals per finding (nationally and by region). Trend line and median superimposed.

2) Histogram: x-axis is time line by quarter; y-axis = number of regulatory conferences per non-green finding (nationally and by region). Trend line and median superimposed.

Other Areas: Enhance Public Confidence, Unnecessary Regulatory Burden

b. Stakeholder feedback on appropriateness of resource expenditure

How: Tailored survey question

Success: Track and trend, stable or increasingly positive perception.

Lead: IIPB

Graphic Display: Two graphs to present entire picture (2 could be superimposed over 1).

1) Histogram: x-axis - time line by year; y-axis - numbers of respondents (Alternate: y-axis % respondents). One block would indicate # of positive responses, second would indicate # of negative responses.

2) Trend line: x-axis - time line by year; y-axis survey scale (Lickert scale of 1 -5). One trend line would indicate average response, second would indicate median.

Other Areas: Enhance Public Confidence, Unnecessary regulatory Burden (also primary)

ES2 The SDP Results Are Accurate and Complete. Measured By:

a. Same as MS1.a

ES3 The SDP Results Are Timely. Measured by:

a. Determining whether timeliness goals were met

How: Regions report percent not meeting timeliness goals and how many days late each was. (Should capture all goals here, including OE goal of ID to panel.)

Success: Track 1st year for baseline then steady or decreasing trend.

Lead: Regions

Graphic Display: Two graphs for completeness

1) Histogram: x-axis is time line by quarter; y-axis = percent not meeting goals - plotted by region/national by goal with median and average trend line superimposed.
2) Trend line: x-axis is time line by quarter; y-axis = number of days late per late finding. Plot average and median by region and nationally.

Other Areas: Predictable, Enhance Public Confidence (also primary)

ES4 Same as US2.a

ES5 Licensees Accept SDP Results. Measured By:

a. Tracking the total number of appeals

How: Regions report: track total and by region

Success: Track 1st year to establish baseline
Steady or decreasing trend

Lead: Regions

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of appeals(national & by region). Trend line superimposed. Expect low numbers, however, could also divide by cornerstone or strategic performance area.

Other Areas: Risk Informed, Enhance Public Confidence, Unnecessary Regulatory Burden

b. Tracking the proportion of appeals that are successful

How: Regions report

Success: Goal of Zero. If any, steady or decreasing trend.
Any will be considered for process adjustment
Annual report of any resultant adjustments

Lead: Regions

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = percent of appeals successful(national & by region - may not have enough data). Trend line superimposed.

Other Areas: Risk Informed, Enhance Public Confidence, Unnecessary Regulatory Burden

C. ENHANCES PUBLIC CONFIDENCE

CS1 Results Are Communicated in a Way That Demonstrates That the NRC Understands the Plant's Performance. Measured By:

a. Verifying the accuracy of facts NRC communicated (color of findings is accurately reported)

How: IIPB annual audit of website

Success: Low number of inaccuracies; steady or declining trend - Must address all inaccuracies

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of inaccuracies (national and by region - may not have enough data). Trend line superimposed.

Other Areas: Understandable

B. REDUCES UNNECESSARY REGULATORY BURDEN

BS1 The Use of the SDP Results in the Licensee Resource Expenditures Consistent with the Significance of Inspection Findings. Measured by:

a. Same as ES1.b

ASSESSMENT PROGRAM

O. OBJECTIVE

OA1 Subjective Judgment Is Minimized and Is Not a Central Feature of the Process. Actions Are Determined by Quantifiable Assessment Inputs (Examine PIs, SDP, Cross-Cutting Issues). Measured by:

b. Number and type/scope of deviations from the action matrix, including whether level of management is appropriate.

How: IIPB audit of assessment-related letters

Success: Few deviations, declining trend

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of deviations. Expect very low numbers.

b. Percent successful, number and type/scope of documented challenges of assessment outcomes.

How: Data collection using data collection forms-quarterly summary in operating plans. Regions record number and type of challenges to assessment and assessment follow up letters, basis for appeal and justification of final resolution.

Success: Few successful challenges; steady or declining trend from first year benchmark.

Lead: Regions

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = both number of challenges and percent of successful challenges. Show trend lines for each. Expect low numbers, however, could divide into cornerstone or by region if significant contribution seen during analysis.

OA2 The Program Is Well-defined Enough to Be Consistently Implemented. Measured By:

a. Track number of significant departures from requirements in IMC 0305.

How: IIPB audit of assessment letters and review of feedback forms and lessons learned regarding assessment program and IMC 0305. Significant departures could include not sending our required letters or missing deadlines

Success: Few departures, steady or declining trend.

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of departures. Expect low numbers, however, could divide into cornerstone or by region if significant contribution seen during analysis.

R. RISK-INFORMED

RA1 Actions Taken Are Commensurate with the Risk of the Issue and Overall Plant Risk. Measured By:

a. Actions or lack of actions taken on plants is at the appropriate level for the significance of the issues, based on inputs from PIs and inspection findings.

How: IIPB review of actions taken for other than green findings and compare to Action Matrix

Success: Few departures, steady or declining trend.

Lead: IIPB

Graphic Display: Histogram: x-axis is 4 regions; y-axis = number of issues identified. Expect low numbers.

b. See OA1.b

U. UNDERSTANDABLE

See Overall ROP Program Metrics

P. PREDICTABLE

PA1 Results Are Repeatable. Measured By:

a. Regions arrive at same Action Matrix column and take similar actions with similar inputs (especially cross cutting issues).

How: Audit of assessment-related letters. Track number/type of issues.

Success: Few disagreements, with a steady or declining trend.

Lead: IIPB

Graphic Display: Histogram: x-axis is annual count by region; y-axis = number of issues. Expect low numbers.

PA2 The Program Is Implemented as Defined. Measured By:

a. See OA1.a

b. See OA1.b

c. Resources expended are appropriate and consistent across regions (region data collection).

How: Extract data from RITS and track the resources expended on assessment activities under the ASM code (i.e. resources spent preparing for and participating in quarterly, mid-cycle, and end-of-cycle meetings; staffing assessment and assessment follow up letters; and conducting public meetings).

Success: Resources expended are not significantly different between regional offices and not significantly different from allocated hours.

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of hours/site.

d. Number and type/scope of actions recommended by the Agency Action Review (AAR) meeting beyond the actions already taken per the ROP program.

How: IIPB audit of assessment-related letters

Success: Few additional actions are recommended by AAR meeting; steady or declining trend from first year benchmark.

Lead: IIPB

Graphic Display: Histogram: x-axis is year; y-axis = number of actions overturned. Expect very low numbers.

PA3 Information (Process Outputs and Documents) Is Readily Available in a Timely Manner. Measured By:

a. Track the number of instances in which timeliness goals established in IMC 0305 were not met.

How: Regions collect timeliness data for quarterly reviews (within 5 weeks after end of quarter); Mid-cycle, and End-of-Cycle reviews (within 6 weeks after end of quarter; issuance of assessment letters (within 2 weeks after quarterly review, 3 weeks after mid-cycle review, and 1 week after Agency Action Review); assessment follow up letters (within 2 weeks after letter providing SDP results); and public meetings (within 16 weeks of end of assessment period).

Success: Few instances in which timeliness goals were not met; steady or declining trend from first year benchmark.

Lead: Regions; IIPB use data from Region Operating Plans where possible

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number and % of letters, meetings, etc not held within requirements.

b. See CA4.a

c. Stakeholder feedback to determine acceptability of timeliness goals and information distribution methods.

How: Survey question

Success: Steady or improved perception of timeliness goals and information distribution methods as compared to the first year benchmark.

Lead: IIPB

Graphic Display: None. Analysis and discussion only

PA4 Process Documents Are Stable Enough to Be Perceived as Predictable. Measured By:

a. Number and type/scope of revisions to IMC 0305 beyond those already planned.

How: Count the number of unplanned substantive revisions. Substantive revisions do not include those revisions that are for editorial or clarification purposes only.

Success: Few revisions; steady or declining trend from first year benchmark.

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = numbers of changes and issues driving changes. Expect low numbers.

M. MAINTAINS SAFETY

MA1 Appropriate Actions Are Taken to Address Performance That Is Not in the Licensee Response Column, and to Prevent Recurrence. Measured by:

a. Feedback on appropriateness of actions.

How: Survey question to both internal and external stakeholders - examine trends of negative comments on appropriateness of actions

Success: Steady or improved perception of appropriateness of actions as compared to the first year benchmark.

Lead: IIPB

Graphic Display: Histogram: x-axis is year; y-axis = number of negative comments. Possibly divide into cornerstone or by region if significant contribution seen during analysis.

b. See PA2.d

MA2 NRC Actions Are Timely. Measured By:

a. Lag time between issuance of an assessment letter discussing an other than very low safety significance issue and completion of the supplemental inspection.

How: Count the number of days between the issuance of the assessment letter vs. the completion of the supplemental inspection (not issuance of the inspection report).

Success: Tracking first year to establish thresholds.

Lead: Regions

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = average and median times; record number of issues below graph. IIPB will generate summary graphs by region.

E. EFFICIENT, EFFECTIVE, AND REALISTIC

EA1 Achieves the Desired Outcomes (I.e., Maintains Safety)

a. Effectiveness is achieved if measures in Maintains Safety are met.

EA2 Resources Expended Are Appropriate to Plant Performance. Measured By:

a. Stakeholder feedback on appropriateness of resources expended (survey).

How: Survey question

Success: Steady or improved perception of appropriateness of expended agency resources as compared to the first year benchmark.

Lead: IIPB

Graphic Display: None. Analysis and discussion only.

b. Count deviations between the job level of people involved in NRC actions vs the job levels specified in the Action Matrix.

How: Regions collect data on the job level of the people who conduct and attend assessment meetings

Success: Steady or declining deviations as compared to the first year benchmark.

Lead: Regions

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of deviations from the Action Matrix.

EA3 The Agency Action Review Confirms Decisions Made Throughout the Assessment Cycle. Measured By:

a. See PA2.d

EA4 NRC Actions Are Timely and the Process Provides Timely Indications of Declining Safety Performance. Measured by:

a. See MA2.a
b. See PA3.a and CA4.a
c. See PA3.c

EA5 The Process Is Stable. Measured by:

a. See PA4.a

C. ENHANCES PUBLIC CONFIDENCE

CA1 All Other Self-assessment Goals and Attributes Are Essentially Met.

CA2 Actions Taken Are Consistent with the Action Matrix. Measured by:

a. See PA2.a

CA3 Information Is Relevant, Useful and Meaningful. Measured By:

a. Reports are written in plain language.

How: Survey; external stakeholder feedback collected by OPA.

Success: Steady or improved perception as compared to the first year benchmark.

Lead: IIPB

Graphic Display: None. Analysis and discussion only.

b. Specific feedback from stakeholders.

How: Survey question

Success: Steady or improved perception as compared to the first year benchmark.

Lead: IIPB

Graphic Display: None. Analysis and discussion only.

CA4 Information Is Readily Available in a Timely Manner. Measured by:

a. Timeliness of web posting and availability via ADAMs for assessment letters (HQ data collection).

How: IIPB post letters to external web within timeliness goals using electronic version of letters entered into ADAMS by the regions. IIPB record number of letters not available in ADAMS and number of letters not posted to web within goals.

Success: IIPB posts assessment letters to external web using electronic version in ADAMS within 10 weeks after end of mid-cycle and end-of-cycle assessment periods, 8 weeks after end of intervening quarters.

Lead: IIPB

Graphic Display: Histogram: x-axis is time line by quarter; y-axis = number of letters not available in ADAMS and not posted on web within goals.

CA5 Information Is Accurate. Measured by:

a. Assessment and assessment follow up letters are consistent with inspection reports.

How: IIPB audit to assess the number of instances in which the assessment results of risk significant findings (other than green) do not correlate with the description as described in the inspection report.

Success: Very few instances, steady or declining trend as compared to first year benchmark.

Lead: IIPB

Graphic Display: None. Analysis and discussion only.

B. REDUCES UNNECESSARY REGULATORY BURDEN

BA1 It focuses licensee resources on areas of greatest significance and minimizes rework or duplication. Measured by:

a. Feedback from licensees.

How: Survey question

Success: Steady or improved perception as compared to the first year benchmark.

Lead: IIPB

Graphic Display: None. Analysis and discussion only.

BA2 It Minimizes Inconsistencies Between Regions and Inspectors. Measured by:

a. Program office review of assessment letters for consistency and compliance against IMC 0305.

How: IIPB review of assessment letters for consistency and compliance against IMC 0305.

Success: Few discrepancies; steady or declining trend from first year benchmark.

Lead: IIPB

Graphic Display: None. Analysis and discussion only.

b. See EA2.c

10/31/00

PERFORMANCE INDICATORS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
OP1	**a.** Independent PI verification using IP 71151	**M**		**M**	**M**	**m**	**M**	**M**		IIPB / REG	Count
	b. Count discrepancies in reporting and interpretation questions	**M**		**M**	**M**	**m**	**M**	**M**	**m**	IIPB	Count
RP	Risk Informed	**No Metrics**									
UP1	**a.** Understandable	**See OP1.a**									
	b. Understandable	**See OP1.b**									
PP1	**a.** Predictable	**See OP1.a**									
	b. Predictable	**See OP1.b**									
PP2	**a.** Count changes completing the change process				**M**		**M**	**m**	**m**	IIPB	Count
MP1	**a.** Track/trend PIs that cross multiple thresholds					**M**	**M**	**m**		IIPB	Count
MP2	**a.** Reports of unintended consequences of PIs					**M**	**M**	**m**		IIPB, IOLB, REG	Count
	b. Survey licensees regarding PIs driving undesirable decisions					**M**	**M**	**m**		IIPB	Survey
EP1	**a.** Efficiency, Effectiveness, and Realism	**See OP1.a**									
	b. Efficiency, Effectiveness, and Realism	**See OP1.b**									

Attachment 9

PERFORMANCE INDICATORS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
EP2	**a.** Track late PI postings to the Web					**m**	**M**	**M**		IIPB	Count
EP3	**a.** Efficiency, Effectiveness, and Realism	**See PP2.a**									
EP4	**a.** Efficiency, Effectiveness, and Realism	**See MP1.a**									
EP5	**a.** Efficiency, Effectiveness, and Realism	**See MP2**									
EP6	**a.** Efficiency, Effectiveness, and Realism	**See MP3.a**									
	b. Efficiency, Effectiveness, and Realism	**See MP3.b**									
CP1	**a.** Enhance Public Confidence	**See OP1.a**									
	b. Enhance Public Confidence	**See OP1.b**									
	c. Enhance Public Confidence	**See EP2.a**									
BP1	**a.** Survey stakeholders perception of overlap between PIs and inspection								**M**	IIPB	Survey (Internal/ External)
BP2	**a.** Survey licensee regarding perceived overlap between reporting requirements								**M**	IIPB	Survey (External)

INSPECTION PROGRAM CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
OI1	**a.** No. of IR's documenting findings within program guidance	**M**	**m**	**m**			**m**			IIPB	Audit
RI1	**a.** Risk Informed	**See OS1.b**									
	b. Risk Informed	**See OI1.a**									
	c. Risk Informed	**See ES5.a**									
	d. Risk Informed	**See ES5.b**									
RI2	**a.** No. of changes to inspection program documents relating to improve risk informed aspects	**m**	**M**			**m**				IIPB	Count
	b. No. of "no color" findings IAW guidance	**m**	**M**			**m**				IIPB	Audit
RI3	**a.** No. of changes to program documents affecting scope or frequency of inspections		**M**			**M**	**M**			IIPB	Count
UI	Understandable	**See Overall ROP Metrics**								See Overall ROP Metrics	
PI1	**a.** Rates of baseline inspection completion				**M**	**M**	**m**			IIPB	Analysis
	b. Population of and reasons for inspection schedule changes				**M**	**M**	**M**			REG	Count

INSPECTION PROGRAM CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
PI2	**a.** Frequency comparison of baseline inspections to program requirements by inspector type				**M**	**m**				IIPB	Analysis
	b. No. and justification of approved deviations from baseline inspection program				**M**	**m**				IIPB / REG	Count
MI	Maintain Safety	**See RI3.a**									
EI1	**a.** See PI2.a	**See PI2.a**									
EI2	**a.** Compare actual FTE to estimated FTE						**M**			IIPB	Analysis
	b. Track/trend contracted inspection support						**M**			IIPB	Analysis
	c. Inspection schedule changes				**M**	**M**	**M**			REG	Count
EI3	**a.** IR's issued within program goals						**M**			IIPB / REG	Audit
	b. TI completion by completion date						**M**			IIPB / REG	Audit
EI4	**a.** Number of change notices for significant program changes						**M**			IIPB	Count
C12	**a.** Timeliness of posting inspection results on Web and availability of ADAMS							**M**		IIPB	
	b. Number of inaccuracies on Web Site							**M**		IIPB / REG	Audit

INSPECTION PROGRAM CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
BI1	**a.** Industry perspective	**See Overall ROP Metrics**								See Overall ROP Metrics	

SIGNIFICANCE DETERMINATION PROCESS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDICT-ABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
OS1	**a.** Number of SDP packages that are returned to the region by SDP panel due to not meeting established standards	**M**		**m**			**m**			IIPB	Count
	b. Independent Audit of green findings agrees that the selected findings meet established standards	**M**		**m**			**m**			SPSB, IOLB	Audit
RS	Risk Informed	**See US1.a, US1.b, MS1, ES5.a & ES5.b**									
US1	**a.** Degree to which an auditor can trace through the available documentation and reach the same result		**m**	**M**	**M**		**m**			SPSB, IOLB, RES	
	b. Stakeholder feedback indicating ability/inability to reconstruct SDP outcomes		**m**	**M**	**M**		**m**			IIPB	Survey (Int & Ext)
US2	**a.** Trending inspector and SRA feedback over time			**M**			**M**			IIPB, REG	Survey (Internal)
PS1	**a.** Predictable	**See US1.a**									
PS2	**a.** Number of substantive change notices issued on program guidance, tables, or worksheets			**m**	**M**	**m**	**m**			IIPB	Count

SIGNIFICANCE DETERMINATION PROCESS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDICT-ABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
PS3	**a.** Number of worksheet changes due to errors in the worksheets as a result of not reflecting plant design and operating practices			**m**	**M**	**m**	**m**			IIPB	Count
PS4	**a.** Observe trends in survey				**M**		**m**			IIPB	Survey (Int & Ext)
MS1	**a.** The numbers of over-conservative and non-conservative SDP results		**m**			**M**	**M**	**m**		+ IIPB, - SPSB, - IOLB	Count
ES1	**a.** Number of times the NRC must interact with the licensee to produce the desired result						**M**	**m**	**m**	REG	Count
	b. Stakeholder feedback on appropriateness of resource expenditure					**M**	**M**	**m**		IIPB	Survey
ES2	**a.** Efficient and Effective	**See MS1.a**									
ES3	**a.** Determine whether timeliness goals were met				**m**		**M**	**M**		REG	Count
ES4	**a.** Efficient and Effective	**See US2.a**									
ES5	**a.** Number of appeals		**m**				**M**	**m**	**m**	REG	Count
	b. Proportion of appeals that are successful		**m**				**M**	**m**	**m**	REG	Count

SIGNIFICANCE DETERMINATION PROCESS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDICT-ABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
CS1	**a.** Accuracy of facts and color of finding is accurately communicated			**m**				**M**		IIPB	Audit
BS1	**a.** Reduce Unnecessary Regulatory Burden	**See ES1.b**									

ASSESSMENT PROCESS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
OA1	**a.** Number and type/scope of deviations from the action matrix	**M**			**m**					IIPB	Count
	b. Number of challenges and percent of successful challenges of assessment outcomes	**M**	**m**		**m**					REG	Count
OA2	**a.** Number of significant departures from requirements in IMC 0305	**M**								IIPB	Audit
RA1	**a.** Actions taken on plants is at the appropriate level for the significance of the issue		**M**							IIPB	Audit
	b. Risk Informed	**See OA1.b**									
UA	Understandable	**See Overall ROP Metrics**								See Overall ROP Metrics	
PA1	**a.** Regions arrive at same Action Matrix column and take similar actions with similar inputs				**M**					IIPB	Audit / Observa-tion
PA2	**a.** Predictable	**See OA1.a**									
	b. Predictable	**See OA1.b**									
	c. Resources expended are appropriate and consistent across regions				**M**					IIPB	Count

ASSESSMENT PROCESS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
	d. Actions recommended by the Agency Action Review meeting beyond the actions already taken per the ROP program				**M**	**m**	**m**			IIPB	Audit
PA3	**a.** Instances in which timeliness goals established in IMC 0305 were not met				**M**		**m**			RGN	Count
	b. Predictable	**See CA4.a**									
	c. Stakeholder feedback to determine acceptability of timeliness goals and information distribtion methods				**M**		**m**			IIPB	Surver
PA4	**a.** Revisions to IMC 0305 beyond those already planned				**M**		**m**			IIPB	Count
MA1	**a.** Feedback on appropriateness of actions					**M**	**m**			IIPB	Survey (Int & Ext)
	b. Maintain Safety	**See PA2.d**									
MA2	**a.** Lag time between issuance of an assessment letter discussing an other than very low safety significance issue and completion of the supplemental inspection					**M**	**m**			REG	Count

ASSESSMENT PROCESS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
EA1	**a.** Effectiveness is achieved if measures in Maintains Safety are met	**See MA1 and MA2**									
EA2	**a.** Stakeholder feedback on appropriateness of resources expended	**m**			**m**		**M**		**m**	IIPB RGN (IIPB validate)	Audit Survey (Int & Ext)
	b. Track deviations between the job level of people involved in NRC actions vs. the job levels specified in the Action Matrix						**M**		**m**	RGN	Count
EA3	**a.** Efficient and Effective	**See PA2.d**									
EA4	**a.** Efficient and Effective	**See MA2.a**									
	b. Efficient and Effective	**See PA3.a & CA4.a**									
	c. Efficient and Effective	**See PA3.c**									
EA5	**a.** Efficient and Effective	**See PA4.a**									
CA1	**a.** All other metrics and criteria have been essentially met	**Satisfied using all other assessment metrics.**									
CA2	**a.** Enhance Public Confidence	**See PA2.a**									
CA3	**a.** Reports are written in plain language							**M**		IIPB	Survey (Ext)
	b. Specific feedback from stakeholders							**M**		IIPB	Survey (Int & Ext)

ASSESSMENT PROCESS CRITERIA / METRICS

METRIC		MEASURED CRITERIA								DATA	
		OBJECTIVE	RISK INFORMED	UNDER-STANDABLE	PREDIC-TABLE	MAINTAIN SAFETY	EFFICIENT AND EFFECTIVE	ENHANCE PUBLIC CONFIDENCE	UNNECESSARY REGULATORY BURDEN	COLLECTED BY	METHOD
CA4	**a.** Timeliness of web posting and availability via ADAMS for assessment letters				**m**		**m**	**M**		IIPB / RGN	Audit
CA5	**a.** Assessment and assessment follow up letters are consistent with inspection reports							**M**		IIPB	Audit
BA1	**a.** Feedback from licensees								**M**	IIPB	Survey (Ext Industry)
BA2	**a.** Program Office review of assessment letters for consistency and compliance against IMC 0305						**m**		**M**	IIPB	Audit
										IIPB / RGN	
	b. Unnecessary Regulatory Burden	**See EA2.b**									

DRAFT

10/31/00

Revised Treatment of Fault Exposure Hours

Safety System Unavailability is currently computed under the Reactor Oversight Process (ROP) by adding, for each train, planned unavailability, unplanned unavailability and fault exposure hours and dividing the sum by the train hours, and then averaging the train values.

Fault exposure hours are intended to be a surrogate for unreliability. NEI 99-02 includes a provision for removing fault exposure hours after 4 quarters to "reset" the indicator. This is to remedy the condition where a single fault exposure of sufficient duration can cause the indicator to trip the G/W threshold and keep the indicator "non-green" for extended periods of time. Keeping the indicator "non-green" potentially masks future problems and falsely projects an image of system performance that is not indicative of the current system performance.

It was expected that the exercise of the fault exposure removal feature would be relatively rare compared to entry into the non-green zones due to planned and unplanned unavailability. Experience in the pilots and industrywide program to date suggests otherwise. All but one of the 11 non-green indications for safety system unavailability is as a result of large, single fault exposure terms. For the NRC, the action matrix dictates a supplemental inspection, yet the inspections have been very minimal because the cause of the tripped indicator was well known. This leaves the NRC open to criticism.

The following proposal would remedy the above concerns:

1. Licensees continue to report all fault exposure hours as per NEI 99-02.

2. Fault exposure hours associated with reliability metrics (failure to start or to run) are excluded from the calculation of system unavailability.

3. Licensees would annotate the comment field to identify any single conditions that contributed more than 336 hours to the reported fault exposure hours.

4. The baseline inspection program would be modified to direct the inspectors to apply the SDP and determine if there were any performance issues associated with the system/train failure. The results of the SDP would be used to characterize any findings. This appears to be current NRC inspection practice and would, therefore, not result in an appreciable change in inspection hours for the ROP.

Attachment 7

5. A historical review of performance data for recent quarters (4Q99 to 2Q00) suggests that the majority of fault exposure hours are associated with demand failures.

6. The current green/white thresholds should remain to identify instances where planned and unplanned unavailability is exceeding the thresholds. Fault exposure associated exceedances will be evaluated using the SDP as in (4) above.

It is proposed that the above change be piloted concurrently with the pilot for the initiating event indicators. Due to the infrequency of fault exposure conditions, the pilot study should include all plants. As the NRC has all the actions and information to evaluate this change, there is no impact on licensees in conducting an industrywide pilot.

DRAFT

BOUNDING ANALYSIS
FOR
USE OF DEFAULT HOURS IN EDG SSU

Industry Average Availability	Period Hours	Average Available Hours	Hours EDG Not Required	Hours EDG Required	Unavailable Hours	Train Unavailability		% Delta
						Default	Actual	
0.80	26280	21024	5256	21024	526	0.020	0.025	25
0.80	26280	21024	2628	23652	591	0.022	0.025	14
0.86	26280	22600	3680	22600	565	0.021	0.025	19
0.86	26280	22600	1840	24440	611	0.023	0.025	9

Key:

Industry Average Availability:	**0.80 is historical value; 0.86 is 1999 value**
Period hours:	**Hours in three years**
Average Available Hours:	**Period Hours times Industry Average Availability**
Hours EDG Not Required:	**Assumes plant in cold shutdown or refueling 100% of unavailable time or 50% of unavailable time**
Hours EDG Required:	**Difference between Period Hours and Hours EDG Not Required**
Unavailable hours:	**Selected so that Actual unavailability would be 0.025**
Train Unavailability, Default:	**Unavailable Hours divided by Period Hours**
Train Unavailability, Actual:	**Unavailable Hours divided by Hours EDG Required**
% Delta:	**Actual minus Default divided by Default**

Attachment 8

Attachment 8

October 30, 2000

Reactor Oversight Process - Performance Indicator Pilot Program Worksheet for Proposed Replacements for IE01 and IE02

Monthly Report for: (Date)	
	DE1- Number of unplanned shutdowns of the reactor in response to off-normal conditions or events while critical
	DE2- Number of hours of critical operation
	DE3- Number of unplanned reactor shutdowns while critical at or above the point of adding heat in the previous quarter that were caused by or involved an unplanned loss of the normal heat removal path prior to establishing reactor conditions that allow use of the plant's normal long term heat removal systems.

FitzPatrick (333)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Hope Creek (354)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Salem 1 (272)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Salem 2 (311)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Shearon Harris (400)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Hatch 1 (321)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Hatch 2 (366)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Farley 1 (348)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Farley 2 (364)		October	November	December	January	February	March	Comments

Attachment 9

Attachment 9

Reactor Oversight Process - Performance Indicator Pilot Program Worksheet for Proposed Replacements for IE01 and IE02

Monthly Report for: (Date)	DE1- Number of unplanned shutdowns of the reactor in response to off-normal conditions or events while critical
	DE2- Number of hours of critical operation
	DE3- Number of unplanned reactor shutdowns while critical at or above the point of adding heat in the previous quarter that were caused by or involved an unplanned loss of the normal heat removal path prior to establishing reactor conditions that allow use of the plant's normal long term heat removal systems.

	DE1							
	DE2							
	DE3							
Vogtle 1 (424)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Vogtle 2 (425)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Dresden 2 (237)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Dresden 3 (249)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Prairie Island 1 (282)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Prairie Island 2 (306)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Palo Verde 1 (528)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Palo Verde 2 (529)		October	November	December	January	February	March	Comments
	DE1							

Reactor Oversight Process - Performance Indicator Pilot Program Worksheet for Proposed Replacements for IE01 and IE02

Monthly Report for: (Date)	DE1- Number of unplanned shutdowns of the reactor in response to off-normal conditions or events while critical
	DE2- Number of hours of critical operation
	DE3- Number of unplanned reactor shutdowns while critical at or above the point of adding heat in the previous quarter that were caused by or involved an unplanned loss of the normal heat removal path prior to establishing reactor conditions that allow use of the plant's normal long term heat removal systems.

	DE2							
	DE3							
Palo Verde 3 (530)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Diablo Canyon 1 (275)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Diablo Canyon 2 (323)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							
Fort Calhoun (285)		October	November	December	January	February	March	Comments
	DE1							
	DE2							
	DE3							

Summary of 10/31/2000 FAQ Review

FAQ	Status
8.22	Approved
8.24	Approved
11.7	Approved
11.8	Approved
11.9	Approved
11.10	Approved
11.11	Approved
11.12	Approved
11.14	Approved
11.15	Approved
12.4	Tentative Approval
12.6	Approved
13.3	Approved
13.4	Approved
15.6	Tentative Approval
15.7	Tentative Approval
15.10	Tentative Approval

Attachment 10

Attachment 10

FAQ Log 8				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
15.	MS02	~~**Question:**~~ ~~Our HPSI system is similar to that depicted in Figure 5.2 of NEI 99-02, consisting of two independent trains, as defined NEI 99-02 for monitoring purposes. Each train consists of one HPSI pump and the associated train related valves and piping. Each pump is able to take a suction from the Refueling Water Tank (RWT) or Containment Sump (CS), and inject into the RCS through four cold leg injection flow paths and one hot leg flow path. Each cold leg flow path includes one motor operated isolation valve and an isolation check valve. These flow paths, four each for the two independent trains, then converge into four common headers that flow to the RCS. Flow may be split between the train related cold legs and the associated hot leg later into an event when necessary to preclude boron precipitation in the core.~~ ~~We are performing an analysis to demonstrate that injection flow, sufficient to satisfy the requirements of the safety analysis, can be achieved by either train with one of its four cold leg injection paths out of service. Is it acceptable, in the assessment of NEI 99-02 availability, to employ realistic component performance assumptions in a system level analysis, or is the utility required to use all design basis assumptions, consistent with those used in the associated safety analysis.~~ ~~**Alternate Question:**~~ ~~Is it acceptable, in the assessment of NEI 99-02 availability, to employ realistic component performance assumptions in a system level analysis, or is the utility required to use all design basis assumptions, consistent with those used in the associated safety analysis?~~ ~~**Response:**~~ ~~Fault exposure unavailable hours are not counted for a failure to meet design or technical specifications, if engineering analysis determines the train was capable of performing its safety function during an operational event. The engineering analysis must take into account other equipment deficiencies that existed at any time during the failure to meet design or technical specification requirements, and must assume the worst case accident for the plant conditions. However, it is not necessary to assume an independent single failure and the analysis can assume nominal (expected) performance of other plant equipment. System unavailability is not subject to the same analysis requirements as the corresponding 10CFR50 Appendix K safety analysis.~~ ~~**Alternate Response:**~~ ~~Guidance on operability determinations and the resolution of degraded and nonconforming conditions is provided in Generic Letter 91-18. However, for the purposes of the safety system unavailability indicator, each train of a system must be capable of meetings all of its design basis requirements. To demonstrate that a train is available, then, requires that all design basis assumptions used in the FSAR safety analyses be employed.~~	Discussed 6/14/00 Revised 6/14/00 Action: NEI discuss revised response with APS 7/11/00 – awaiting response from APS 7/12/00 – Discussed, on hold 8/2 – Alternate question and response provided by NRC 9/20 – Obtain clarification on assumptions being used by APS (SK) 10/30 – Withdrawn by APS	APS

FAQ Log 8

Temp No.	PI	Question/Response	Status	Plant/ Co.
21.	MS04	**Question:** **Appendix D Indian Point 2, Indian Point 3** The ECCS designs for Indian Point 2 and Indian Point 3 include two recirculation pumps, recirculation containment sump, piping and associated valves located inside containment, and two RHR/LHSI pumps, piping, containment sump (dedicated to RHR), two RHR heat exchangers and associated valves. These two subsystems are identified in the Technical Specifications and FSAR. The RHR/LHSI system is automatically started on an SI, takes suction from the RWST as does the high head SI pumps (3), and provides water in the injection phase of an accident. The recirculation pumps are in standby in the injection phase and are actuated by operator action during switchover for the recirculation phase of an accident and RHR is put in standby. The recirculation pumps (2) take suction from its dedicated sump and have the capability to feed the containment spray system, low head injection lines and the suction of the high head SI pumps for high head injection. The recirculation pumps are inside containment and can not be tested during operation, but both are required to be operable above 350 degrees F and one above cold shutdown. How should the recirculation subsystem unavailability be reported under the mitigating system PI for RHR. **Response:**	Discussed with IP2, IP3, NRC in 8/28 conf. call.	IP3
22.	MS04	**Question:** Function 2 of the RHR Performance Indicator monitors the ability to remove decay heat during a normal heat unit shutdown. The 2 SDSC HX's at Calvert Cliffs are supplied RCS fluid by 2 SDC pumps via a common suction and common discharge header (not single failure proof). The SDC HX's are cooled by the Component Cooling (CC) Water system. The CC system is a closed system that exchanges heat to the Salt Water system via two parallel heat exchangers (CCHX). Component Cooling is always operated cross tied before and after the CCHX's. When one of the two SW trains is removed from service only one CCHX is available. Two saltwater pumps, with independent power, are available as well as 2 component cooling water pumps with independent power. In Mode 5, RCS Loops filled, Technical Specification LCO (old: TS 3.4.1.3; ITS: 3.4.7) requires 2 SDC loops (one operable and one in operation assuming no S/G's available). We consider that one SDC loop is unavailable (SDC HX's and SDC pumps) if one Salt Water train is removed from service. Is this a proper interpretation of NEI 99-02 guidelines? **Response:** Yes. Assuming the Salt Water System is a necessary support system, and the Salt Water System can provide the cooling for Component Cooling sufficient to remove heat for one loop of SDC. However, when one train of the Salt Water System is removed from service, you no longer meet the "Support System Unavailability" guidance of NEI 99-02 for not reporting unavailable hours. In this situation you are required to report unavailable hours for one train of the monitored system (i.e., SDC.), since one loop of SDC is available and in operation and the other loop cannot be made available without removing heat removal capability from the operating loop of SDC. If, however, the remaining Salt Water System train is capable of satisfying the heat removal requirements of both trains of SDC, no SDC unavailability would be reported.	On hold. K. Borton to discuss with CC 8/3/00 – NEI revision of questionand proposed response. **9/20 – Tentative Approval 10/31 – Approved, Post date 10/31**	Calvert Cliffs
24.	MS04	**Question:** Are there times when RHR Shutdown Cooling can be removed from service without incurring unavailable hours, if allowed by Technical Specifications (i.e., reactor level and temperature requirements met).	Revised 6/13/00 Discussed 6/14/00 Action: NRC to	Duane-Arnold

FAQ Log 8				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
		Response: Yes. Unavailable hours are counted only for periods when a train is required to be available for service. However, Technical Specifications that require one subsystem remain operable and in operation above a specified temperature would be counted if one subsystem were not available or an alternate method (normally specified in the Technical Specification Action Statement) were not available.	discuss with Residents 8/29 – NEI Suggestion to remove "See FAQ ID 17" 9/19- NEI revision **9/20 – Tentative Approval** **10/31 – Approved, post 10/31**	

DRAFT

FAQ Log 9				
Temp. No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
9.2	MS01 MS02 MS03 MS04	**Question** NEI 99-02 Revision 0 defines criteria for determining availability during surveillance testing. This definition can be found on page 26. It allows operator action to be credited for the declaration of availability. NEI 99-02 also defines criteria for determining fault exposure. This definition can be found on pages 28 & 29. Line 5, page 29 references operator action. It states, "Malfunctions or operating errors that do not prevent a train from being restored to normal operation within 10 minutes, from the control room, and that do not require corrective maintenance, or a significant problem diagnosis, are not counted as failures." In addition, page 29, line 13, states, "A train is available if it is capable of performing its safety function." If the fault can be corrected quickly (much less than 10 minutes) by a single operator action that is contained in a written procedure, is uncomplicated, and does not require diagnosis or repair, but the operator action cannot be shown to satisfy auto-start time design assumptions (e.g., HPCI injection within 45 seconds), should fault exposure hours be assigned to a failure? **Response** Operator actions to restore a train to normal operation following a malfunction cannot be credited for any purpose. A failure would be reportable per 10 CFR 50.72(b)(2)(iii) and 50.73(a)(2(v); it would be considered a maintenance-preventable functional failure; it would be counted as a demand and a failure in PRA applications; and it would counted in the performance indicators as both a safety system functional failure and a period of unavailability (if it resulted in failure of one of the four monitored functions). Operator actions to recover from an operating error could be credited if the function can be promptly restored from the control room by an uncomplicated action (a single action or a few simple actions) without diagnosis or repair (i.e., the restoration actions are virtually certain to be successful during accident conditions). Note that there is no reference to a time limit since these actions must be completed promptly. The paragraph starting on line 5 of page 29 was not intended to be in NEI 99-02, Rev. 0. All references to time constraints were intended to be removed from that document. Due to an oversight, the words were not removed. This will be corrected in the next revision of the document. **Alternate Response (NEI 8/29)** No, provided the configuration can be promptly restored in the control room without the loss of safety function. Restoration actions for the malfunction must be contained in a written procedure, must be uncomplicated (a single action or a few simple actions) and must not require corrective maintenance or a significant problem diagnosis.	. 7/12/00 – NRC action to confirm consistency with MR and expand upon response. 8/2/00 NRC revision to proposed response. 8/29 NEI Alternate response added. 9/20 – Discussed. On hold, NRC to continue review. 10/31 – Discussed. NRC review ongoing.	ComEd

FAQ LOG 10				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
10.5	MS01 MS02 MS03 MS04	**Question:** Is it appropriate to use the default value, that is, the period hours, for the hours that each EDG train is required to be operable when not all trains are required to be operable during shutdown? This results in a non-conservative performance indicator. **Response:** No. The default values in the guidance were provided as an option for licensees to use to reduce the data collection burden. In some cases, the default value is conservative. In other cases, such as with the EDGs, it may be non-conservative. The default values may be used when they are conservative. The non-conservative default values may not be used and the actual hours the train is required to be operable must be determined.	Discussed 6/14/00 On hold, NEI and NRC review ongoing 10/31 – Discussed. NRC to discuss with Maint. Rule personnel.	NRC

DRAFT

FAQ LOG 11				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
11.7	MS02	**Question:** In NEI 99-02, under the Support System Unavailability header, it is identified that in some instances, unavailability of a monitored system that is caused by unavailability of a support system used for cooling *need not be reported* if cooling water from another source can be substituted. The rules further state that if both the monitored and support system pumps are powered by a class 1E electric power source, then a pump powered by a non- class 1E source may be substituted provided the redundancy requirements to accommodate single failure requirements for electric power and cooling water are met. At our site, the HPCS pump room is cooled by a safety related unit cooler, HVR-UC5. This unit cooler has non-safety related/non-Class 1E powered Normal Service Water (NSW) supplied to it and a safety related/Class 1E Standby Service Water (SSW) supplied to it as a backup cooling source. The SSW system has four 50% capacity pumps, two per train. Both trains of SSW merge into a common header at the unit cooler. If we remove one train of SSW from service can NSW be credited as a substitute thus keeping HVR-UC5 and the HPCS pump available?	7/12/00 Discussed. On hold for review. 8/29 NEI removed plant name from response. **9/21 – Tentative Approval 10/31 – Approved, post 10/31**	River Bend
		Response: In this case, no substitution is required, since the HPCS system is still available. Removal of one 100% train of SSW from the unit cooler has no effect on the availability of HPCS since one 100% train of SSW is still available to service the HVR-UC5 unit cooler. The single failure criteria should only be applied to cases where there is substitution of the support system and in cases where the mitigating systems have installed spares or redundant trains.		
11.8	MS01 MS02 MS03 MS04	**Question:** Our Standby Service Water System (SSW) is designated as a Support System for each of the four mitigating systems. The system has two trains and each train has two 50% capacity pumps. At the mitigating system interface, the SSW support system either has both trains of SSW supplied to the cooling load or one SSW train exclusively supplying the cooling load. A train with one pump in service will supply the required SSW loads except the RHR train. The RHR train is normally valved out of service and is manually lined up to support a design basis accident condition some time after the automatic initiation sequence is completed. We consider all mitigating systems within a train, except RHR in that train, available with one SSW pump out of service. However, RHR, with the SSW from the other train available, is considered available. Have we calculated the availability correctly?	7/12/00 Discussed. On hold for review. **9/21 – Tentative Approval 10/31 – Approved, post 10/31**	River Bend
		Response: Yes. The mitigating systems that can be supplied by a single SSW train with one SSW pump in service are available.		
11.9	MS02	**Question:** On page 49 of NEI 99-02, the monitored function of the BWR HPCI system is described as "The ability of the monitored system to take suction from the condensate storage tank **or** [emphasis added] from the suppression pool and inject at rated pressure and flow into the reactor vessel." However, the CST only provides about 30 minutes of water and the safety analysis assumes HPCI availability for about 8 hrs. If the suction path from the CST is available but the path from the suppression pool is not, are unavailable hours counted for HPCI?	7/12/00 Discussed. On hold for review. 8/2/00 NRC – Proposed response revised.	NRC

FAQ LOG 11				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
		Response: Yes. The intent of the indicator is to monitor the ability of a system to perform its safety function. In this case, the safety function requires the availability of the suction path from the suppression pool. (Editorial Note: The guidance in NEI 99-02 will be changed to eliminate the words "from the condensate storage tank or," leaving only "from the suppression pool.".)	9/19 NEI, response revised to reflect "Editor's Note" **9/21 – Tentative Approval** **10/31 – Approved, post 10/31**	
11.10	BI01	**Question:** **Proposed replacement for FAQ 193** ~~(Revisions to 193 indicated)~~ The definition of the RCS Specific Activity PI is the maximum RCS activity as a percentage of the technical specification limit. Should licensees with limits more restrictive than the technical specifications use the more restrictive limit or the TS limit? **Response:** Licensees should use the most restrictive regulatory limit (e.g., technical specifications[TS] or license condition). However, if the most restrictive regulatory limit is insufficient to assure plant safety, then NRC Administrative Letter 98-10 applies, which states that imposition of administrative controls is an acceptable short-term corrective action. When an administrative control is in place as a temporary measure to ensure that TS limits are met and to ensure public health and safety, that administrative limit should be used for this PI.	7/12/00 Discussed. On hold for review. 8/2/00 – NRC revision to proposed response. **9/21 – Tentative Approval** **10/31 – Approved, post 10/31**	NRC
11.11	IE03	**Question:** Regarding the Unplanned power change PI, I have the following questions: 1. Is the 20% full power intended to be 20% of 100% power, or 20% of the maximum allowed power for a particular unit, say 97% [(.2)(.97)= 19%] 2. If an unplanned transient occurs which is greater than 20%, the operators stabilize the plant briefly and then cause a transient greater than 20% in the opposite direction, does that count as 2 hits against the PI? 3. For calculating the change in power, should secondary power data be used, nuclear instruments or which ever is more accurate? **Response:** 1. It is intended to be 20% of 100%. 2. In general, yes, however the specific scenario needs to be evaluated. 3. Licensees should use the power indication that is used to control the plant at the time of the transient.	7/12/00 Discussed. On hold for review. 8/2/00 NRC revision to question and response. 8/29 NEI response revision. **9/21 – Tentative Approval** **10/31 – Approved, post 10/31**	NRC

FAQ LOG 11

Temp No.	PI	Question/Response	Status	Plant/ Co.
11.12	IE03	**Question:** The licensee reduced power on both units to support grid stability in response to a fault on off-site transmission line 15616. Each of the licensee's two operating units are supplied from two 345 kilovolt (kV) lines. Line 15616, which supplies Unit 1 , was lost as a result of a static line failure. The power reduction was requested by the system load dispatcher in accordance with System Planning Operating Guide (SPOG) 1-3-F-1, "Station Operating Guidelines," Revision 1, to allow disabling the Unit 1 turbine generator trip scheme while line 15616 was out of service. With line 15616 out of service, a fault on the second line supplying Unit 1 (line 15501 from) would cause a Unit 1 turbine trip. The turbine trip would then cause a reactor trip (if reactor power is greater than the P-8 interlock setpoint of 32.1%). The turbine trip is intended to prevent overloading remaining grid circuits, causing the grid to become unstable. It is not a Reactor Protection System function. Reducing power and disabling the Unit 1 turbine trip scheme would prevent Unit 1 from tripping if line 15501 was faulted or lost. There were no on-site problems associated with the loss of the transmission line. The first paragraph of SPOG 1-3-F-1 states that "it is not necessary to take any corrective measures for stability for the outage of any single line provided that the protection system is normal. However, it may be desirable to disable the unit trip scheme(s) during single line outages." The power reductions requested by the load dispatcher (just over 20%) met the procedurally recommended output limitations for the station with line 15616 out of service with the stability trip scheme disabled. Does this situation count? **Response:** No. In the situation described, the power reduction would not count. The exception from counting unplanned power changes when directed by the load dispatcher is intended to exclude power changes directed by the load dispatcher under normal operating conditions due to load demand and economic reasons, and for grid stability or nuclear plant safety concerns arising from external events outside the control of the nuclear unit. However, power reductions due to equipment failures that are under the control of the nuclear unit are included in this indicator.	7/12/00 Discussed. Action, NRC to rewrite question and response for clarification. 8/2/00 NRC rewrite of question and response. 8/3/00 NEI Removal of plant name. 9/19 NEI, minor mod of question. **9/21 – Tentative Approval 10/31 – Approved, post 10/31**	NRC
11.14	EP03	**Question:** During a scheduled siren test, a siren (or sirens) fail or cannot be verified to have responded to the initial test. A subsequent test is done to troubleshoot the problem. 1) Should the troubleshooting test(s) be counted as siren test opportunities? 2) Should failures during troubleshooting be considered failures? 3) Should post maintenance testing or system retests after maintenance be counted as opportunities? 4) If subsequent testing shows the siren to be operable (verified by telemetry or simultaneous local verification) without any corrective action having been performed, can the initial test be considered a success?	7/12/00 – On hold, NRC review/revision 8/29 NEI proposed response revision. 8/30 Question replaced with rewrite from 8/17 NRC/NEI meeting **9/21 – Tentative Approval 10/31 –**	NRC

FAQ LOG 11

Temp No.	PI	Question/Response	Status	Plant/ Co.
		Response: 1) No. These tests are not regularly scheduled tests because they are only conducted if there are siren failures. 2) No. These tests are not regularly scheduled tests because they are only conducted if there are siren failures. 3) No. These tests are not regularly scheduled tests because they are only conducted if there are siren failures. 4) Yes, but only if it is reasonably verified that the failure was in the testing equipment and not the siren control equipment, i.e., the siren would have sounded when called upon, even though the testing equipment would not have indicated the sounding. In the process of verifying that the failure is only with testing equipment, problems such as radio signal transmission weakness or intermittent signal interference should be eliminated as the cause. Maintenance records should be complete enough to support such determinations and validation during NRC inspection.	**Approved, post 10/31**	
11.15	PP01	**Question:** If perimeter intrusion equipment, CCTV monitoring equipment or systems supporting their functionality are damaged or destroyed by environmental conditions and remains unable to perform their intended function after the condition subsides (e.g., a lightning strike, wind, ice, flood) do you need to count any hours towards the performance indicator?	7/12/00 Discussed. On hold for review. 8/3/00 NEI proposed response. **9/21 – Tentative Approval 10/31 – Approved, post 10/31**	\ComEd
		Response: No. If after the environmental condition clears, the zone remains unavailable, despite reasonable recovery efforts, the hours do not have to be counted.		

FAQ LOG 11

Temp No.	PI	Question/Response	Status	Plant/ Co.
11.16	PP01	~~CLARIFICATION NEEDED ON "FAQ" # ID 59 ISSUED WITH NEI 99-02 REV. 0 MARCH 28 2000 "COMP. POSTING FOR NON-FAILURE OF EQUIPMENT"~~ ~~In FAQ 59 and resulting response it states in part that, if an IDS system segment needs to be declared inoperable due to a Security Plan commitment of "x" number of false alarms received, the zone would need to be comped, repair / test the segment, return to operable and remove the comp post. In the response it goes on to state that if there is no equipment malfunction and the system would still have alarmed during intrusion (still capable of performing its intended function) then the man hours that were established as part of the "precautionary maintenance" activity would not be counted.~~ ~~**Question:**~~ ~~If the zone / segment remains operable (still capable of performing its intended function) but is "declared" inoperable due to a Security Plan commitment of "x" number of false alarms received is it necessary to have maintenance "check" the zone / segment prior to declaring the zone operable? Or, can functional testing be conducted by security on that zone / segment assuring that it was capable of alarming during an intrusion?~~ **Question** For Security Intrusion Detection Systems (IDS), if the number of IDS false alarms exceeds "x" number per hour, the licensee considers the IDS segment failed and implements compensatory measures for the IDS segment. There are two questions: 1) If an IDS segment is declared failed (but left in service) and security personnel's inspection identifies no reason to contact the maintenance organization for resolution and operability testing of the IDS segment by security personnel is successful (without performing corrective maintenance) should compensatory hours be counted for the time period that the IDS was considered as failed? 2) If an IDS segment is declared failed (but left in service) and security personnel contact the maintenance organization for resolution, the maintenance evaluation does <u>not</u> disclose any malfunction, and operability testing of the IDS segment by security personnel is successful, should compensatory hours be counted for the time period that the IDS was considered as failed?	7/12/00 Discussed. On hold for review. 8/3/00 NEI proposed response. 8/29 NEI response revision. 9/21 – Discussed. On hold. 10/27 ComEd revision of FAQ and proposed response. 10/31 – Discussed. NRC to review proposed revision.	ComEd
		Licensee Proposed Response: ~~If in the scenario identified above, a zone/segment tests "OK" as performing its intended function (per the normal test procedures for zone operability) there would be no need to have maintenance perform any actions prior to declaring the zone operable. Therefore, the hours associated with this situation would not be counted.~~ 1) No. Because security's operability test is sufficient in demonstrating that the IDS is performing its intended function, compensatory hours would <u>not</u> be counted. 2) No, Because security's operability test is sufficient in demonstrating that the IDS is performing its intended function and maintenance activities did not repair, replace or identify a malfunction, compensatory hours would <u>not</u> be counted.		

FAQ LOG 12				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
12.4	IE02	**Question**: In the Scrams With a Loss of Normal Heat Removal performance indicator, the definition of "loss of normal heat removal path" includes loss of main feedwater. Our plant is designed to isolate main feedwater after a trip by closing the main feedwater control valves. The auxiliary feedwater pumps then are designed to start on low steam generator level (which is expected following operation above low power conditions), providing our normal heat removal. A clarifying note in the Guideline clearly states that "Design features to limit the reactor cooldown rate, such as closing the main feedwater valves on a reactor scram, are not counted in this indicator." Also, the response to FAQ 65 states that "The PI is monitoring the use of alternate means of decay heat removal following a scram." If our plant receives a spurious or invalid feedwater isolation signal, our main feedwater pumps will trip and a plant scram will occur. The auxiliary feedwater pumps will start on the loss of the main feedwater pumps, prior to reaching a low SG level condition. In this example, main feedwater still isolates, although not in the normal fashion, auxiliary feedwater provides the normal heat removal, and no alternate means of decay heat removal is required. This is not believed to be a Scram with a Loss of Normal Heat Removal. Is this the correct interpretation? ~~**Alternate Question (NRC Feedback form from Kewaunee)**~~ ~~During a typical plant trip, auxiliary feedwater auto-starts on low steam generator level, main feedwater isolation valves auto-close, and, per emergency procedures, the main feedwater pumps are stopped. Based on this sequence of events, the licensee considers auxiliary feedwater as the "normal heat removal path" and not main feedwater. Consequently, the licensee did not classify a plant trip caused by loss of all feedwater as a scram with loss of normal heat removal. Is this correct?~~	NRC Alternate question and response, 8/28 9/19 NEI Revision of "licensee proposed response" 9/21 – Discussed. On hold. 10/27 NRC revision of response to alternate question. **10/31 – Revised, Tentative Approval**	Kewaunee
		Response: ~~Yes. See FAQ 65~~ ~~**Response to Alternate Question**~~ ~~No. Any reactor scram caused by the loss of all feedwater (or decreasing condenser vacuum) counts as a scram with loss of normal heat removal. For purposes of this PI, the normal heat removal path includes main feedwater, regardless of the plant design or response to a trip; auxiliary feedwater is not to be used as the normal path.~~ Yes. In accordance with the current guidance (see FAQ 65), this event would not count. However, for purposes of this PI, the normal heat removal path includes main feedwater, regardless of the plant design or response to a trip. Auxiliary feedwater is not to be considered the normal path.		

FAQ LOG 12

Temp No.	PI	Question/Response	Status	Plant/ Co.
12.5	EP01	**Question:** ~~Currently the "Communicator" key ERO positions for event notification are defined as the ERO position responsible for the notifications, not just a telephone talker. If the key position person delegates completion of the notification form to another individual, but keeps responsibility for approval (must review and sign the form before offsite notifications are made), must the person completing the form be considered a Key ERO position also? It is understood that responsibility for approving the notification implies responsibility to verify the data recorded and to challenge inconsistencies before authorizing the notification.~~ ~~**Alternate Question (8/30 NRC)**~~ NEI 99-02, Rev 0, page 100, lines 11-15, discusses the role of communicators (TSC and EOF), who provide offsite notifications. A site has identified the TSC and EOF senior managers as communicators for the purposes of the tracking drill participation. These individuals ultimately approve all offsite communications from their respective facilities, however, they do not collect data for the notification form. The licensee's basis is that NEI 99-02 addresses the desire to not track "phone talkers". 1) Is this an appropriate interpretation of 99-02? ~~**Licensee Proposed Response:**~~ ~~In the example provided, the person completing the form does NOT have to be considered a Key ERO position.~~ **Response ~~to Alternate Question~~** 1) No. The expectation of 99-02 is that the participation of the communicators responsible for collection of timely and accurate data for the notification form will be tracked. However, there are cases where the position responsible for approval (the senior managers in the above example) actually collects the data for the form, approves it and hands it off to a phone talker. Where this is the case, the senior manager is also the communicator and the phone talker need not be tracked.	8/30 NRC alternate question and response provided and discussed. 9/21 – On hold 10/27 Discussed during 10/27 public meeting. Agreement reached on "alternate" question and response. 10/31 – On hold	Kewaunee

FAQ LOG 12

Temp No.	PI	Question/Response	Status	Plant/ Co.
12.6	IE03	**Question:** **Question rewritten by Pallisades (see 8/4/00 log for prior version)** This FAQ raises a question regarding the proper interpretation of the wording of this PI. NEI 99-02 states the purpose of this PI as: "This indicator monitors the number of unplanned power changes (excluding scrams) that could have, under other plant conditions, challenged safety functions." Our plant planned a sequence of power changes and equipment manipulations to deal with a secondary chemistry problem. The plan was ready >72 hours in advance, and a written schedule existed. During execution of the plan, an additional equipment problem was discovered, but plant management chose to continue with the planned sequence of power changes, and to address the emergent equipment issue later in the planned outage. Had it occurred by itself, the equipment problem may have required a power change in excess of 20%. However, the problem did not cause departure from the already planned and scheduled activities, and did not cause urgent response from Operations staff to mitigate the equipment problem. There were no reactor safety implications. Consistent with the intent of the PI, we believe this event should not be counted against this PI. However, part of the PI definition on page 18 of NEI 99-02 states that "Unplanned changes in reactor power are changes in reactor power that are initiated in less than 72 hours following the discovery of an off-normal condition, and that result in, or require a change in power level of greater than 20% full power to resolve." This wording could be viewed in two ways: • This was a newly emergent off-normal condition that, by procedure, would have "required" the plant to reduce power if the condition were not fixed, it should be counted whether or not the power reduction was already planned and scheduled. Or • The emergent condition was not what initially caused the planned reduction in power, but was simply a secondary reason to proceed with the existing plan, the condition did not "result in" a change in power level greater than 20%. Should the sequence of power changes be counted as an unplanned power change? **Response:** No. This sequence of power changes would not count.	8/4/00- Discussed. Pallisades to prepare shortened version of FAQ for consideration. 8/15/00 – Question rewritten by Pallisades. Proposed response added by NEI. **9/21 Revised. Tentative Approval. 10/31 – Approved, post 10/31**	Pallisades

FAQ Log 13				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
13.1	IE03	**Question:** You have a slow leak on a feedwater pump and a work request is initiated and placed on the 12 week schedule, then after 72 hours passes the leakage increases, but the work package is still applicable. You immediately decrease power to fix the pump. Is this considered an unplanned power change since you had a work package written and there was greater than 72 hours? **Response:** The event would count as an Unplanned Power Change. Power changes caused by or in response to off-normal events during the course of a pre-planned activity, count as unplanned power changes when a determination is made that the off-normal events necessitated a course of action that was **outside contingency planning** in place for the pre-planned activities. In these instances, the off-normal events cause, in effect, an **exiting of the preplanned course of action** and any power changes that occur following the exit of the plan are counted toward the performance indicator. Minor modifications to a planned activity in response to events are not considered unplanned power changes and are not counted toward the performance indicator.		Beaver Valley
13.2	IE02	**Question:** Crystal River Unit 3 (CR-3) is configured with two once-through steam generators (OTSGs). Two Main Steam Isolation Valves (MSIVs) are installed in each of the two main steam lines. On August 27, 1998, CR-3 was in MODE 1 operating at 100 percent RATED THERMAL POWER. While troubleshooting a half trip signal on the Emergency Feedwater Initiation and Control (EFIC) System Channel A Main Steam Line Isolation (MSLI), both MSIVs to OTSG A closed. This action isolated steam relief to the condenser through the turbine bypass valves from the A OTSG and isolated the steam supply to Main Feedwater Pump (MFP) A. As required by administrative procedures, the reactor operator initiated a manual trip upon closure of the MSIVs. After the manual trip, the OTSG A level lowered enough to initiate Emergency Feedwater (EFW). EFW controlled level in both OTSGs as designed, although MFP B remained in service and available at all times. OTSG B provided RCS heat removal to the condenser with EFW maintaining OTSG level. Does this count? **Response:** No. It must be a complete loss of normal heat removal to count in this indicator.	10/30 NEI addition of proposed response.	Crystal River 3
13.3	EP03	**Question:** Siren systems may be designed with equipment redundancy or feedback capability. It may be possible for sirens to be activated from multiple control stations. Feedback systems may indicate siren activation status, allowing additional activation efforts for some sirens. 1) A siren system has two normally attended control stations from which the system may be activated. If a siren test from one station is unsuccessful can a test performed from the second station be considered as a part of the regularly scheduled test? 2) A siren test technician sent multiple activation signals to a siren that initially appeared not to respond. The siren responded. Can the multiple signals be considered as the regularly scheduled test and hence a success?	8/30 – Discussed 9/15 – NRC, Revision of response **9/21 – Tentative Approval** **10/31 – Approved, post 10/31**	NRC

FAQ Log 13				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
		Response: 1) Yes, if the use of redundant control stations is in approved procedures and is part of the actual system activation process. A failure of both systems would only be considered one failure, where as the success of either system would be considered a success. If the redundant control station is not normally attended, requires set up or initialization, it may not be considered as part of the regularly scheduled test. Specifically, if the station is only made ready for the purpose of siren tests it should not be considered as part of the regularly scheduled test. 2) Yes, if the use of multiple signals is in approved procedures and part of the actual system activation process. However, the use of multiple activation signals to achieve successful siren tests may not include any activities outside the regularly scheduled test, such as troubleshooting, post maintenance testing or activation signals sent after the initial activation process has ended.		
13.4	EP	**Question:** A licensee used same scenario for each of the three response teams. The drills contributed to DEP and ERO statistics. Repetitive use of the scenario has the potential to skew the PI success rate if scenario confidentiality is not maintained. There was no indication that drill participants were intentionally informing other teams about the scenario, but discussions of the drill could inadvertently reveal facts about the scenario. Is it permissible to repeat the use of scenarios in drills that contribute to DEP and/or ERO statistics?	8/30/00 – Discussed 9/15 – NRC response revision **9/21 – Revised. Tentative Approval** **10/31 – Approved, post 10/31**	NRC
		Response: Yes, the licensee need not develop new scenarios for each drill or each team. However, it is expected that the licensee will maintain a reasonable level of confidentiality so as to ensure the drill is a proficiency-enhancing evolution. A reasonable level of confidentiality means that some scenario information could be inadvertently revealed and the drill remains a valid proficiency-enhancing evolution. It is expected that the licensee will remove from the drill performance statistics any opportunities considered to be compromised. There are many processes for the maintenance of scenario confidentiality that are generally successful. Examples may include the following: • Confidentiality statements on the signed attendance sheets, • Spoken admonitions by drill controllers. Examples of practices that may challenge scenario confidentiality include: • Drill controllers or evaluators or mentors, who have scenario knowledge becoming participants in subsequent uses of the same scenarios, • Use of scenario reviewers as participants.		

FAQ Log 14				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
14.1	MS01 MS02 MS03 MS04	**Proposed Replacement for FAQ 190 (FAQ 190 and current response shown in BOLD, followed by proposed replacement)** (FAQ 190)In reference to Page 29, in NEI 99-02 Revision 0, "Removing (Resetting) Fault Exposure Hours": Clarification is needed for the third bullet which states, "Supplemental inspection activities by the NRC have been completed and any resulting open items have been closed out in an inspection report." What if the inspection in question covered and documented more activities than just those related to the fault exposure hours. Do the ancillary findings (those not related to the root cause or prevention of recurrence to the fault exposure finding(s)) need to be closed out or just the findings related to the condition causing the fault exposure hours? Also, it is possible that the fault exposure hours would not place the indicator in the white band and that no supplemental inspection activities would be required. Response 1. The wording, "any resulting open items" means any items related to the condition causing the fault exposure. 2. If there is no supplemental inspection, there are no open items to be closed out. Consequently, this would not be a criterion for removal of fault exposure hours in this case. **Question (Proposed Replacement for FAQ 190):** The guidance in NEI 99-02 states that fault exposure hours may be removed after certain criteria are met. One criterion is that supplemental inspection activities by the NRC have been completed and all open items have been closed out. If a licensee has fault exposure hours that meet all other stated criteria (≥336 hours, corrective actions completed, and four quarters have elapsed) but the indicator is still green, does the baseline inspection count in place of the supplemental inspection? Also, please clarify the intent of the phrase "after 4 quarters have elapsed from discovery." **Response:** 1. No. Fault exposure hours may be removed only if the indicator is outside the green band so that supplemental inspection is necessary (and all other stated criteria are met). The intent of this provision was to allow the removal a large number of fault exposure hours due to a single event or condition so that a licensee would not be outside the green band for an extended time period. There are two reasons for this: (1) after the stated criteria are met, the PI is no longer considered to be indicative of current performance; and (2) unavailable hours accumulated later would put the licensee further into the white band but would not trigger any further NRC action, since the white band is 1.5 to 2 times as wide as the green band. For these reasons, the hours may be removed to reset the indicator so that further fault exposure hours could trigger further NRC response. 2. The intent of the phrase "after 4 quarters have elapsed from discovery" was that the indicator would be non-green for 4 quarters minimum, regardless of when the corrective actions were completed and the supplemental inspection closed out. The quarter in which the fault exposure hours is identified would be the first non-white quarter, and 12 months (four quarters) later, assuming all required conditions are met, the hours could be removed from the calculation for that quarter.		NRC feedback form from Catawba
14.2	MS05	**Proposed Replacement for FAQ 143** **Question:** Are failures of the RCIC system included in the Safety System Functional Failure indicator only if RCIC is reportable in accordance with 10 CFR 50.73(a)(2)(v)?		NRC

FAQ Log 14				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
		Response: No. Because RCIC has safety significance at BWRs, and because the ROP is a risk-informed process, failures of RCIC that are reported are included in the SSFF. While the intention of NEI 99-02 was to report only failures meeting the reporting criteria of 10 CFR 50.73(a)(2(v), RCIC reporting has been inconsistent among licensees. To provide consistency in reporting and in the ROP, all failures of RCIC should be reported. The question of RCIC reportability per 10 CFR 50.73 is currently under review by the NRC.		
14.3	IE02	**Proposed Replacement for FAQ 142** ~~(Revisions to 142 indicated)~~ **Question:** Under the Scram with Loss of Normal Heat Removal performance indicator in NEI 99-02 Draft D, the Definition of Terms states that a loss of normal heat removal path has occurred whenever any of the following conditions occur: loss of main feedwater, loss of main condenser vacuum, closure of main steam isolation valves or loss of turbine bypass capability. The purpose of the indicator is to count scrams that require the use of mitigating systems, however, instances that meet the above criteria in a literal sense could occur without the necessity of using mitigating systems. For example, a short term loss of main feedwater injection capability due to pump trip on high reactor water level post-scram is a common BWR event. Under these conditions, there is ample time to restart the main feed pumps before addition of water to the vessel via HPCI or RCIC is required. A second example would be a case where the turbine bypass valves (also commonly called steam dump valves) themselves are unavailable, but sufficient steam flow path to the main condenser exists via alternate paths (such as steam line drains, feed pump turbine exhausts, etc.) such that no mitigating systems are called upon. **Response:** The determining factor in this indicator is whether or not the normal heat removal path is *available* to the operators, not whether the operators choose to use that or some other path. The indicator excludes events in which the normal heat removal path through the main condenser is easily recoverable from the control room without the need for diagnosis or repair. There was no intent to provide incentive for operators to operate the plant in a manner contrary to best practices for a given situation.		NRC
14.4		**Proposed replacement for FAQ 151** ~~(Revisions to 151 indicated)~~ **Question:** Section 2.2, Mitigating Systems Cornerstone, Safety System Unavailability, Clarifying Notes, Hours Train Required states the Emergency AC power system value is estimated by the number of hours in the reporting period because emergency generators are normally expected to be available for service during both plant operations and shutdown. Considering only one train of Emergency AC power systems may be required in certain operational modes (e.g. when defueled), should actual required hours be determine for each train in place of using the default period hours? In certain operational modes it appears inconsistent to use period hours for hours required, yet not report the unavailable hours if a train is removed from service and Technical Specifications are still satisfied. **Response:** ~~For the situation described above, it is acceptable to report the default value, or period hours, given the current NEI 99-02 guidance. This guidance is being evaluated to account for the above noted scenario, as it relates to a non-conservative SSU value being reported.~~ Use of the default value (period hours) in this case is non-conservative and can produce train unavailable hours that are anywhere from 7.5% to 20% too low. Therefore the use of the default value for EDG unavailability is inappropriate. Licensees should report the actual hours each EDG train is required to be operable. Note: NEI 99-02 will be revised to conform to this guidance.	10/27 NRC revision to proposed response.	NRC

FAQ Log 14				
Temp No.	**PI**	**Question/Response**	**Status**	**Plant/ Co.**
14.5	MS01 MS02 MS03 MS04	**Question:** NEI 99-02 [page 26] allows for exclusion of test activities from Planned Unavailable Hours if "... the function can be promptly restored either by an operator in the control room or by a dedicated operator stationed locally for that purpose." NEI 99-02 goes on to state that "The intent of this paragraph is to allow licensees to take credit for restoration actions that are virtually certain to be successful (i.e., probability nearly equal to 1) during accident conditions." During the performance of certain routine surveillance's, such as Slave Relay Testing, a control switch in the Control Room may be temporarily placed in an "out-of-normal" position to support the test. An example would be placing a Residual Heat Removal Pump switch in the "Pull-to-Lock" position. Can the time that this switch is in this position be excluded from Planned Unavailability Hours if the following conditions are met? 1) This switch is not danger tagged or otherwise restricted from being promptly returned to its normal position, and 2) this switch is within the control responsibilities of a regularly assigned control room operator(s), and 3) this switch can be virtually certain to be successfully restored to its proper position by initial steps taken per the station's Emergency Operating Procedures for immediate response to an accident condition. Does a control room operator have to be specifically designated as responsible for the restoration of a component in the control room, under the same conditions noted above, if such restoration can be virtually certain to be successful under the station's Emergency Operating Procedures for immediate response to an accident condition?		Seabrook
		Licensee Proposed Response: The answer to the first question is "Yes". Positioning a switch in the Control Room to support test/surveillance activities does not render the respective system or train "unavailable" if that switch position is either overridden by an actual emergency actuation signal or that switch can be returned to its normal position promptly by a control room operator without requiring additional actions such as clearing tags. If the position of this switch would be verified or returned to "normal" by procedures intended to guide the control room operators through a sequenced, directed response to an actual emergency, it can be considered to be virtually certain to be successfully restored. The answer to the second question is "No". A specifically designated (i.e., "dedicated") control room operator is not required to be assigned for component restoration if the component can be promptly returned to its normal condition by a control room operator without requiring additional actions such as clearing tags. The position of the component would be verified or returned to "normal" by procedures intended to guide the control room operators through a sequenced, directed response to an actual emergency.		

Question (FAQ Log 8, Temp. No. 15, Palo Verde HPSI valve):
Is it acceptable, in the assessment of NEI 99-02 availability, to employ realistic component performance assumptions in a system level analysis, or is the utility required to use all design basis assumptions, consistent with those used in the associated safety analysis?

Response
Guidance on operability determinations and the resolution of degraded and nonconforming conditions is provided in Generic Letter 91-18. However, for the purposes of the safety system unavailability indicator, each train of a system must be capable of meeting all of its design basis requirements. To demonstrate that a train is available, then, requires that all design basis assumptions used in the FSAR safety analyses be employed.

Question (FAQ Log 9.2)

Response
Operator actions to restore a train to normal operation following a malfunction cannot be credited for any purpose. A failure would be reportable per 10 CFR 50.72(b)(2)(iii) and 50.73(a)(2(v); it would be considered a maintenance-preventable functional failure; it would be counted as a demand and a failure in PRA applications; and it would counted in the performance indicators as both a safety system functional failure and a period of unavailability (if it resulted in failure of one of the four monitored functions).

Operator actions to recover from an operating error could be credited if the function can be promptly restored from the control room by an uncomplicated action (a single action or a few simple actions) without diagnosis or repair (i.e., the restoration actions are virtually certain to be successful during accident conditions). Note that there is no reference to a time limit since these actions must be completed promptly.

The paragraph starting on line 5 of page 29 was not intended to be in NEI 99-02, Rev. 0. All references to time constraints were intended to be removed from that document. Due to an oversight, the words were not removed. This will be corrected in the next revision of the document.

Question (FAQ Log 12.4, NRC feedback from Kewaunee - combine with FAQ 142)
During a typical plant trip, auxiliary feedwater auto-starts on low steam generator level, main feedwater isolation valves auto-close, and, per emergency procedures, the main feedwater pumps are stopped. Based on this sequence of events, the licensee considers auxiliary feedwater as the "normal heat removal path" and not main feedwater. Consequently, the licensee did not classify a plant trip caused by loss of all feedwater as a scram with loss of normal heat removal. Is this correct?

Response
In accordance with the current guidance (see FAQ 65 on page 15 of NEI 99-02), this event would not count. However, for purposes of this PI, the normal heat removal path includes main feedwater, regardless of the plant design or response to a trip. Auxiliary feedwater is <u>not</u> to be considered the normal path.

Question (FAQ Log 14.1, NRC feedback from Catawba - to replace part 2 of FAQ 190)
The guidance in NEI 99-02 states that fault exposure hours may be removed after certain criteria are met. One criterion is that supplemental inspection activities by the NRC have been completed and all open items have been closed out. If a licensee has fault exposure hours that meet all other stated criteria (≥336 hours, corrective actions completed, and four quarters have elapsed) but the indicator is still green, does the baseline inspection count in place of the supplemental inspection? Also, please clarify the intent of the phrase "after 4 quarters have elapsed from discovery."

Response
1. No. Fault exposure hours may be removed only if the indicator is outside the green band so that supplemental inspection is necessary (and all other stated criteria are met). The intent of this provision was to allow the removal a large number of fault exposure hours due to a single event or condition so that a licensee would not be outside the green band for an extended time period. There are two reasons for this: (1) after the stated criteria are met, the PI is no longer considered to be indicative of current performance; and (2) unavailable hours accumulated later would put the licensee further into the white band but would not trigger any further NRC action, since the white band is 1.5 to 2 times as wide as the green band. For these reasons, the hours may be removed to reset the indicator so that further fault exposure hours could trigger further NRC response.

2. The intent of the phrase "after 4 quarters have elapsed from discovery" was that the indicator would be non-green for 4 quarters minimum, regardless of when the corrective actions were completed and the supplemental inspection closed out. The quarter in which the fault exposure hours is identified would be the first non-white quarter, and 12 months (four quarters) later, assuming all required conditions are met, the hours could be removed from the calculation for that quarter.

Question (FAQ Log 14.2, NRC - to replace FAQ 143)
Are failures of the RCIC system included in the Safety System Functional Failure indicator only if RCIC is reportable in accordance with 10 CFR 50.73(a)(2)(v)?

Response
No. Because RCIC has safety significance at BWRs, and because the ROP is a risk-informed process, failures of RCIC are included in the SSFF. While the intention of NEI 99-02 was to report only failures meeting the reporting criteria of 10 CFR 50.73(a)(2)(v), reporting of RCIC failures in LERs has been inconsistent among licensees. To provide consistency in the ROP, all failures of RCIC should be included in the SSFF indicator. The question of RCIC reportability per 10 CFR 50.73(a)(2)(v) is currently under review by the NRC.

Question (FAQ Log 14.3, NRC - to replace FAQ 142)

Response
The determining factor in this indicator is whether or not the normal heat removal path is *available* to the operators, not whether the operators chose to use that path or some other path. The Indicator excludes events in which the normal heat removal path through the main condenser is easily recoverable from the control room without the need for diagnosis or repair.

There was no intent to provide incentive for operators to operate the plant in a manner contrary to best practices for a given situation.

Question (FAQ 14.4, NRC - replacement for FAQ 151)

Response

Use of the default value (period hours) in this case is non-conservative and can produce train unavailable hours that are anywhere from 8% to 20% too low. Therefore the use of the default value for EDG unavailability is inappropriate. Licensees should report the actual hours each EDG train is required to be operable. Note: NEI 99-02 will be revised to conform to this guidance.

AVERAGE DAILY POWER CHANGES PER 7,000 CRITICAL HOURS

Purpose
This indicator monitors the number of changes in average daily power level of greater than 20 percent of full power per 7,000 critical hours.

Indicator Definition
The number of changes in average daily power level of greater than 20 percent of full power during the previous four quarters per 7,000 critical hours.

Data Reporting Elements
The following data are reported for each reactor unit:

- the number of changes in average daily power level of greater than 20 percent of full power in the previous quarter
- the number of critical hours in the previous quarter

Calculation
The indicator is determined using the values for the previous four quarters as follows:

$$\text{value} = \frac{\text{(number of changes in average daily power level in the previous 4 qtrs)}}{\text{(number of critical hours in the previous 4 qtrs)}} \times 7{,}000 \text{ hrs}$$

Definition of Terms
Average Daily Power Level is the net electrical energy generated during the day (measured from 0001 to 2400 hours inclusive) in megawatt-hours, divided by 24 hours.

Net electrical energy generated is the gross electrical output of the unit measured at the output terminals of the turbine-generator during the reporting period, minus the normal station service electrical energy utilization. If this quantity is less than zero, a negative number should be used.

Clarifying Notes
7,000 hours is used because it represents one year of reactor operation at about an 80% availability factor.

2,400 critical hours is the minimum number of critical hours in four consecutive quarters for which an indicator value is calculated. Rate indicators can produce misleadingly high values when the denominator is small; for critical hours under 2,400, a single shutdown can produce a value that crosses the green-white threshold. Therefore, the displayed value will be N/A. All data elements must nevertheless be reported.

Exceptions to changes in average daily power level are made for power changes directed by the load dispatcher due to load demand, economic reasons, grid stability concerns, and nuclear plant safety concerns. They do not include power reductions, directed by the load dispatcher or not, that are required because of nuclear plant equipment problems.

PROPOSAL FOR REMOVING FAULT EXPOSURE HOURS FROM THE SAFETY SYSTEM UNAVAILABILITY PI

For any of the monitored safety systems, fault exposure hours associated with demand or run failures will be excluded from the calculation. Those fault exposure hours should be reported in the Comments field of the quarterly report to the NRC. Fault exposure hours caused by other events or conditions will be reported and included in the calculation.

CREDIT FOR OPERATOR RECOVERY ACTIONS:

ACTIONS THAT ARE NOT VIRTUALLY CERTAIN TO BE SUCCESSFUL

Operator response that reduces the probability of success is not credited by the NEI 99-02 guidance. Circumstances to be considered to determine if an action is virtually certain include the following:

a. *The length of time between the event and the time the action is begun* - any delay reduces the probability of success.
b. *Other actions performed prior to restoration* - any other actions performed prior to restoration reduces the probability of success.
c. *The complexity of restoration* - actions of a single individual that are involved (more than a few simple actions), that cannot be accomplished quickly (such as repositioning several valves, or repositioning a large valve), or that require coordination with others (such as removing tags that requires coordination with the control room or other operators) reduces the probability of success.
d. *The operator's familiarity with the required action* - if the action is not part of a normal operating procedure or is in an infrequently used procedure that is not readily available to the operator reduces the probability of success.
e. *The operator's ability to determine the proper action* - if the situation requires diagnosis or repair, the probability of success is reduced.
f. *The availability of the operator to respond quickly* - if the operator is not stationed at the location where the required action is to be performed the probability of success is reduced.

12.5	EP01	**Question:** Currently the "Communicator" key ERO positions for event notification are defined as the ERO position responsible for the notifications, not just a telephone talker. If the key position person delegates completion of the notification form to another individual, but keeps responsibility for approval (must review and sign the form before offsite notifications are made), must the person completing the form be considered a Key ERO position also? It is understood that responsibility for approving the notification implies responsibility to verify the data recorded and to challenge inconsistencies before authorizing the notification. **Alternate Question (8/30 NRC)** NEI 99-02, Rev 0, page 100, lines 11-15, discusses the role of communicators (TSC and EOF), who provide offsite notifications. A site has identified the TSC and EOF senior managers as communicators for the purposes of the tracking drill participation. These individuals ultimately approve all offsite communications from their respective facilities, however, they do not collect data for the notification form. The licensee's basis is that NEI 99-02 addresses the desire to not track "phone talkers". 1) Is this an appropriate interpretation of 99-02? **Licensee Proposed Response:** In the example provided, the person completing the form does NOT have to be considered a Key ERO position. **Response to Alternate Question** 1) No. The expectation of 99-02 is that the participation of the communicators responsible for collection of timely and accurate data for the notification form will be tracked. However, there are cases where the position responsible for approval (the senior managers in the above example) actually collects the data for the form, approves it and hands it off to a phone talker. Where this is the case, the senior manager is also the communicator and the phone talker need not be tracked.

DH

- Final if possible - delete last sentence in? delete original licensee??

RJS

New Draft FAQ we agree

TENTATIVE

FAQ DEP - Emergency Declaration, October 26,2000

Assume that an event has occurred that has resulted in an Emergency Classification. Subsequently, a utility review of the event reveals that the classification was made conservatively and that, in fact, no emergency classification criterion was exceeded.

Should the event be considered as an opportunity?

Proposed Response:

Yes, the event should be considered as an opportunity. The classification opportunity should **not** be considered as a success because it was not declared accurately according to the review conducted by the utility.

New Draft FAQ we agree

FAQ DEP - Discover After the Fact, October 26,2000
A license may discover after the fact (greater that 15 minutes) that an event or condition had existed which met the emergency plan criteria but that no emergency had been declared and the basis for the emergency class no longer exist at the time of discovery.

a) Should the condition described be considered as a missed classification opportunity?

b) Should the condition described be considered as a missed notification opportunity?

Proposed Response:

a) Yes, this classification was not timely.

b) No. NUREG 1022 describes the notification requirements for this consideration.

OK, but